Subterranea

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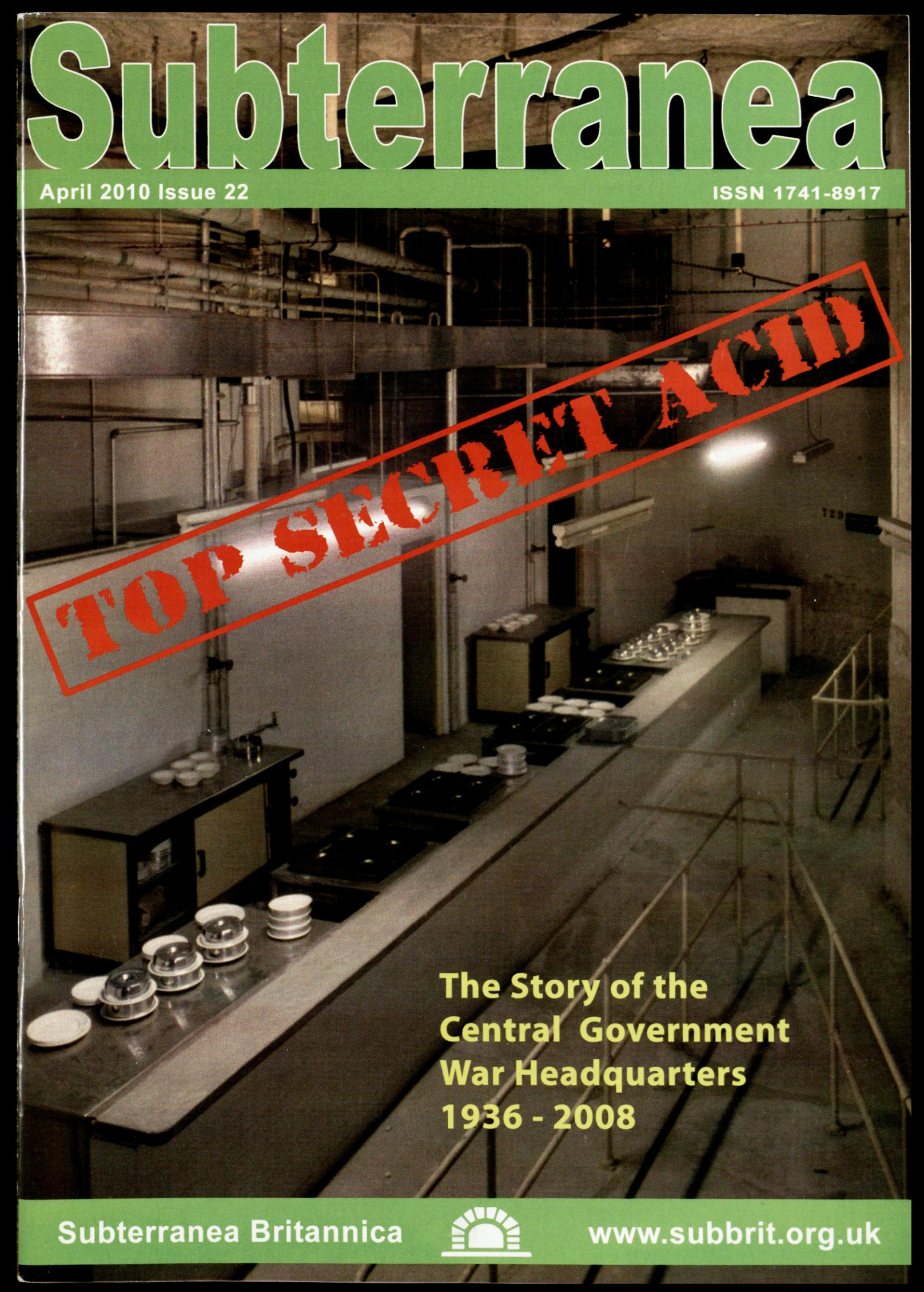


The Story of the Central Government War Headquarters 1936 - 2008

Subterranea Britannica www.subbrit.org.uk

Chairman's Welcome

Martin Dixon

A very warm welcome to what is the first issue of *Subterranea* devoted to a single subject. The Committee decided to issue this 'special' on top of the normal three editions per year. Whether this remains a one-off or the first of a series depends on a number of factors. One is the feedback we get from members to this approach; the second is the availability of funds for additional publications. The last consideration is, of course, finding suitable subjects for this treatment – and equally importantly, authors with the knowledge, skill and time to write such articles.

Corsham is one of Britain's underground sites which has fostered a particular fascination and mystique as the designated Central Government War Headquarters. Active for around 50 years, the site was clearly off-limits in the early days of Subterranea Britannica. Since its recent declassification, visits have been extremely tightly controlled and thus the site has been inaccessible to most of us. Recent Health & Safety concerns have removed access completely from certain areas.

Developed, as it was, from a former Bath stone mine, the site neatly embraces two of Sub Brit's most popular interests. We are grateful to Steve Fox for authoring this splendid issue of *Subterranea*, dedicated to the history of the site; and to Nick Catford and others for the equally fine photographs. Steve's research into the site is first-rate and the story is particularly fascinating to those of us that lived through its period of growth and decline.

Many Sub Brit members are active in preserving and presenting underground sites across the UK. A site such as CGWHQ is, however, of a scale that makes future preservation and access extremely unlikely. What we can do, nevertheless, is to record and preserve the site on paper so that those that follow can learn about and reflect on this fascinating period of the UK's history. Enjoy!

SUBTERRANEA BRITANNICA DIARY

Summary of Forthcoming Events 2010

Sub Brit specific events

17 April Spring Day Conference and AGM, Imperial College, London

24 April Sub Brit visit to West Norwood Cemetery Catacombs

7 – 10 May Sub Brit European weekend in Maastricht

23 May Sub Brit visit to Coleshill Auxiliary Units Training Centre

27 May Paddock (standby Cabinet War Room)
Open Day Dollis Hill

19 June Sub Brit visit to Coleshill Auxiliary Units Training Centre

1 July Copy deadline for *Subterranea 24*

4 August Visit to Greatstone sound mirrors (Kent) and Winchelsea cellars (Sussex)

3 – 5 September Sub Brit UK Study Weekend Cornwall

18 September Paddock (standby Cabinet War Room)
Open Day Dollis Hill

Other underground-related events

24 April SERIAC Conference, Chertsey, Surrey

4 – 6 June NAMHO (National Association of Mining History Organisations)
Conference, Coalpit Heath, South Gloucestershire

9 – 12 September Heritage Open Days across UK

18 – 19 September London Open House

Top Secret – Acid

The Story of the Central Government War Headquarters

by Steve Fox

On Christmas Eve 2004 the Ministry of Defence put a notice on its website announcing that: "A formerly secret Government underground site near Corsham in Wiltshire, which was a potential relocation site for the Government in the event of a nuclear war, was declassified at the end of 2004."

This was the first official acknowledgement of the existence at Corsham of the Central Government War Headquarters, a fact which had been one of Britain's biggest secrets for some forty years. Until then virtually everything about the site and what was done there was classified as "Top Secret", but in the early 1960s to cover all aspects of central government in war an even more restricted classification was introduced: "**Top Secret – Acid**". At the time only a handful of people had access to Top Secret – Acid information, but now the story can be told.

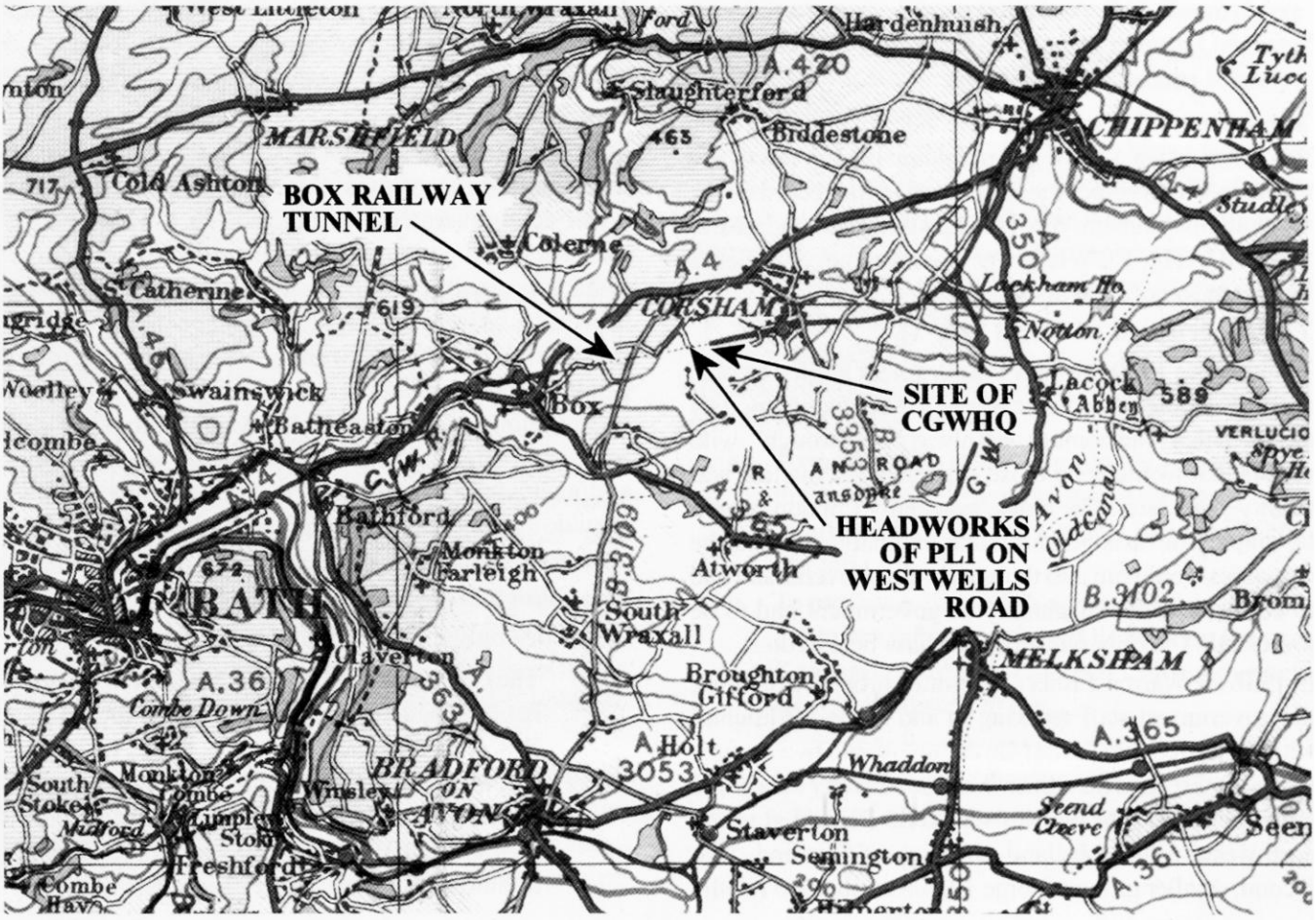
Although some of the facts had already leaked out, the official declassification led to an avalanche of material being released by the National Archives or declassified, sometimes reluctantly, by government departments under the Freedom of Information Act. Some people have even visited the site – something even Government Ministers were not allowed to do in the 1960s.

This article takes full advantage of all this information. It will concentrate on the site's heyday in the early 1960s, but the headquarters did not spring up overnight, and to put it in its historical context we will need to start by looking at how the government protected itself during World War II.

What's in a code name?

But first, there is the problem of what to call the Headquarters. In the official records it was invariably referred to by the current code name which was written in capitals. This was used to refer both to its role – the main relocation site for the nucleus of central government in the event of nuclear war – and the physical location of its site near Corsham, between Bath and Chippenham.

For security purposes the code name was changed frequently and was itself classified. Several years ago Duncan Campbell found one code name – BURLINGTON, and this name has unfortunately stuck, particularly among the less informed. This name was however only used for two years.



The full list of code names and their dates was:

1951 - 1959	SUBTERFUGE
1959 - 1961	STOCKWELL
1961 - 1963	BURLINGTON
1963 - 1970	TURNSTILE
1970 - 1987	CHANTICLEER
1987 - 1992	PERIPHERAL
1992	EYEGLASS

(THIS DOCUMENT IS THE PROPERTY OF HER BRITANNIC MAJESTY'S GOVERNMENT)

H.D.C.(M.G.)(63) 2
Also H.D.C(63) 3

COPY No. 18

25th January, 1963

CABINET

HOME DEFENCE COMMITTEE

SUB-COMMITTEE ON MACHINERY OF GOVERNMENT IN WAR

TURNSTILE

Note by the Secretaries

With reference to H.D.C.(M.G.)(63) 1 the project for a reserve Government headquarters in war will henceforward be known by the codeword TURNSTILE.

2. The project is SECRET. The codeword is classified CONFIDENTIAL unless used in a context which reveals or implies the purpose and location of the project, in which case the document or conversation in which it is so used becomes TOP SECRET.

(Signed) A LEAVETT
J.T. PAGET

Cabinet Office, S.W.1.

25th January, 1963

At most times this article will use the contemporary code name, but when a more general name is used it will use a phrase which sometimes appeared in the records – the Central Government War Headquarters, abbreviated to CGWHQ. The CGWHQ was however never called a bunker in any official document.

The experiences of World War II

When in the 1930s Britain's government started to plan for the seemingly inevitable war with Nazi Germany, they assumed that "the bomber will always get through", with results that would echo those expected of a nuclear war twenty years later. The cities, especially London, would be quickly devastated and made uninhabitable and the casualties would run into thousands. But Government had to continue so the machinery of government had to be protected. The only question was how best to do it.

In 1936 the Warren-Fisher Committee proposed dividing the government staff working in and around Whitehall who supported the Central Government into two groups. On the outbreak of hostilities those not directly concerned with the conduct of the war would be evacuated to the northwestern and Midland counties of England. The second, smaller group of some 12,000 required to run the war effort would initially move some ten miles to the northwestern suburbs of London – to places like Harrow, Wembley and Pinner.

If the air attacks drove the government from London completely, they would move on to towns in the "western counties" (actually those roughly between Birmingham and Bristol). The plan was approved and in 1939 the Rae Committee started active planning for it although most of the detailed work was done by civil servants at the Office of Works. Over the next two years plans would be completed in enormous detail. One of the leading civil servants involved was Eric de Normann of the Office of Works and his name will crop up frequently over the years.

The larger group would be evacuated under what became known as the Yellow Move to places like Morecambe and Blackpool where they would set up office in requisitioned hotels. The more important group would occupy local authority schools whose usual occupants would have been evacuated. If they had to move on to the west under what would become the Black Move, they would also have to use requisitioned hotels and similar large buildings.

Complex transport plans were worked out involving collecting the staff from pick-up points and ferrying them to London main line stations from where a regular stream of trains would take them on to their destination towns. In all cases the staff would be billeted on local householders who, like the staff themselves, would have little warning or choice, and no provision was made for the families of the civil servants.

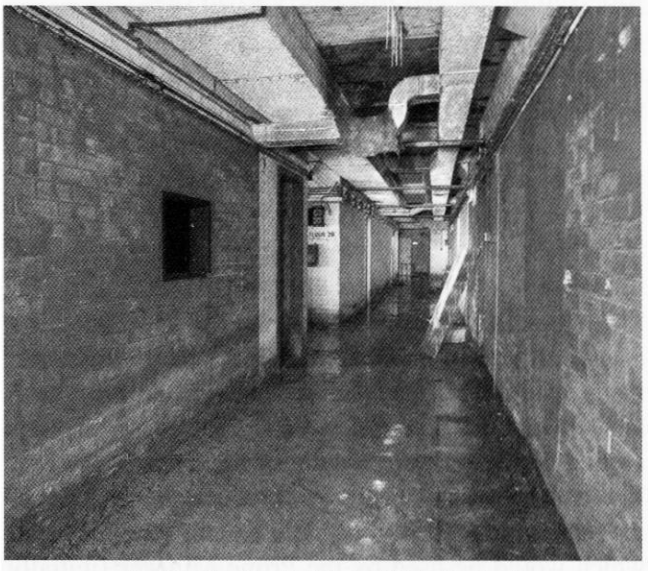
While the north-west suburbs scheme would see civil servants working from ad hoc accommodation, sheltering when necessary in slit trenches, five heavily protected underground war rooms were planned as basements under new government buildings. These would be for the three fighting services, the Ministry of Home Security (which in wartime would be hived off from the Home Office to be responsible for all aspects of air-raid precautions, civil defence and the Regional Commissioners), and a central one for the War Cabinet organisation consisting of the War Cabinet, the Chiefs of Staff and their advisers. The war rooms would receive and analyse information for the decision makers and provide a protected meeting place for them which could continue to operate through air raids.

The suburban war rooms

In practice only three of these war rooms were built:

- The Cabinet War Room which acquired the code name of Paddock was built in the grounds of the Post Office Research Station at Dollis Hill under a new three-storey office block. It had some 38 rooms on two levels (plus 23 on the ground floor) including a BBC studio and was protected by up to nine feet of reinforced concrete.

- The Admiralty bunker at the naval charts depot in Cricklewood, sometimes known as IP after the "insurance party" who would initially occupy it in case the main Admiralty building were damaged. This was manned throughout the war by a small nucleus of staff ready to take over if the main Admiralty building were destroyed.
- The Air Ministry bunker known for anonymity as Station Z beneath the Stationery Office site in Harrow. Like the Admiralty bunker, this was also manned throughout the war.



Inside Paddock. Photo Nick Catford

The War Office (i.e. army) bunker was planned to be built under a Post Office building in Hounslow but this was cancelled and a war room was fitted out in the basement of Kneller Hall in Twickenham. The Ministry of Home Security's War Room was actually built in the basement of the Home Office building in Whitehall with a reserve on the other side of the Thames at Cornwall House.

The War Rooms would only be occupied during air raids. At other times the staff would work in the above-ground offices and they would all, even the Prime Minister, sleep in nearby flats and houses.

The 1938 Munich Crisis saw some of the plans put into operation and they were found wanting, proving perhaps the need to rehearse and publicise plans and not just lock them away in filing cabinets. All the plans were secret and the crisis revealed, for example, that while the Office of Works planned to send several thousand civil servants to work in hotels in Blackpool, Manchester City Council also planned to evacuate one million of its citizens to the town, and in any event all the hotels would probably already have been occupied by self-evacuees.

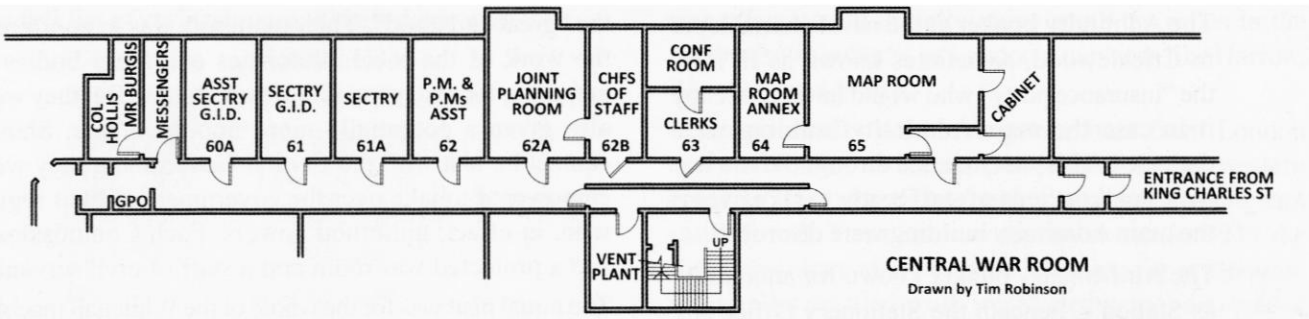
The 1938 crisis also saw the appointment of Regional Commissioners to each of the eleven regions that Britain had been divided into. These men, and they were all men, were appointed by the Government from the ranks of the "great and good". Their main role was to coordinate the work of the local authorities and other bodies in preparing for and responding to air attacks. But they were also given a potentially more important role. Should contact be lost with the Central Government they were empowered to take over the government of their region with, in effect, unlimited powers. Each Commissioner had a protected war room and a staff of civil servants.

The initial plan was for the whole of the Whitehall machine to evacuate immediately war was declared, but it was soon realised that this would have a bad effect on civilian morale and severely disrupt the working of the top echelons of government at exactly the time when it would be most needed. So it was decided that the civil servants would stay at their desks in Whitehall until the level of destruction and dislocation made it impossible for them to continue. It was, however, quickly appreciated that the idea of moving to the suburbs and then, possibly quite soon afterwards, onto the western counties would be even more disruptive and largely pointless and the suburbs scheme was abandoned.

The decision to stay in Whitehall and work under air attack led to the construction of temporary War Rooms in most of the government departments in and around Whitehall. These were built in basements which were reinforced by sealing any windows, installing mechanical ventilation and strutting the ceilings. The idea was not to resist a direct hit but to be proof against blast and splinters and to be able to take the debris load of the building above should it collapse. These temporary War Rooms were available by mid-1939 and the most important one was the Central War Room which in October was renamed the Cabinet War Room.

The Cabinet War Room was built in the basement of the Office of Works building in Whitehall which was variously known as the New Public Offices, Government Offices Great George Street and Government Offices Whitehall South Block. Conversion started in mid-1938 and originally it only had about a dozen rooms with no domestic facilities. But during the war its size, importance and role grew considerably. Its functions were given in a report from October 1939 as:

a. To maintain an up-to-date general picture of the war in all parts of the world for the information of the War Cabinet and the Chiefs of Staff
b. To provide a channel for communicating very important military news to His Majesty the King and members of the War Cabinet through the War Cabinet Office
c. To provide a protected meeting place for the War Cabinet and Chiefs of Staff and the Chiefs of Staff organisation under air-raid conditions.



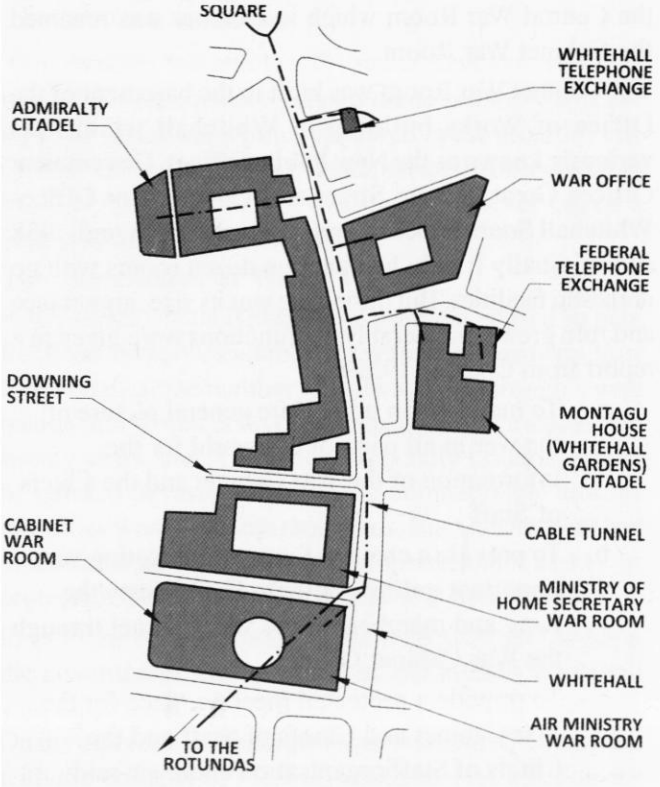
Plan of the original Central War room

It was also described as housing the "central nucleus" of government consisting of the Prime Minister and his Private Office, the War Cabinet Office, War Cabinet Ministers, GHQ Home Forces and parts of the Air Ministry and Treasury.

The Whitehall cable tunnel

Communications were considered vital in all this planning and when the temporary War Rooms were built along Whitehall it was realised that the telephone and telegraph cables connecting them to each other and to the outside world were vulnerable to bombing. This led in early 1939 to the decision to construct a twelve-feet-diameter tunnel some 90 feet deep running for 900 feet under Whitehall.

In the original scheme the cables would enter the buildings through small pipes leading off the main tunnel. However, the tunnel was completed with connecting tunnels usually eight feet in diameter to provide fully protected underground access between the main War Rooms. The tunnel, which was ready for partial use in March 1941, was extended to give access to the Cabinet War Room and later to the Admiralty citadel and the citadels at the Montagu House and Horseferry Road sites.



The wartime war rooms and the Whitehall cable tunnel

The development of the cable tunnel led to several suggestions for new, purpose-built War Rooms to be built alongside it. The most ambitious was for two 1,500-feet-long tunnels to be built parallel with the cable tunnel which would be 25 feet in diameter and provide working and living accommodation for 3,000 on two levels. However, all the schemes were too costly and would take too long to build and were quickly abandoned.

The Black Move scheme was planned in great detail and while most of the staff would have worked in hotels in places like Bath, Cheltenham, Malvern and Droitwich and live with local people, several large country houses around Worcester were taken over for special purposes. The main houses involved were Hindlip Hall which would in effect serve as the Cabinet War Room, Spetchley Hall which would be used by the Prime Minister (initially Chamberlain, later Churchill), his family and his Private Office staff as domestic and working accommodation, and Madresfield Court (codenamed HARBOUR) which would be used by the Royal Family and their entourage.

All these houses were well prepared. Additional telephone lines were installed, the working space in some was extended by erecting temporary huts in the gardens and care was taken to maintain them. Parliament, which had been destined for the Technical College in Neasden under the suburbs scheme, was allocated the Shakespeare Memorial Theatre in Stratford for the Black Move. The BBC also planned to evacuate as part of the move and purchased a large house known as Wood Norton Hall to the west of Evesham which would provide studios and space for five hundred staff.

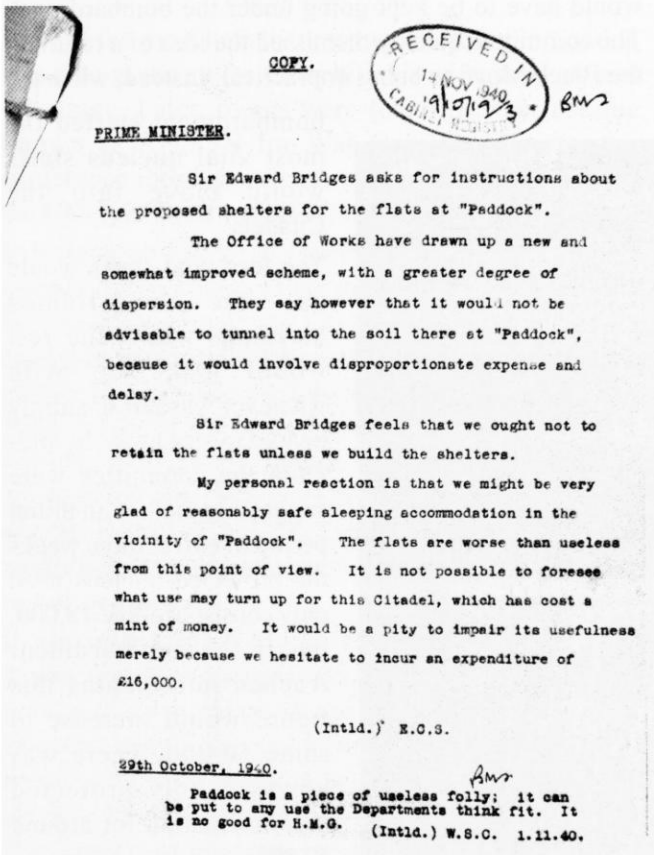
Early moves

On the outbreak of war the Yellow Move was implemented in stages and continued for many months but the nucleus stayed in Whitehall largely unaffected even by the Blitz. By mid-1940 the Black Move was all but abandoned as being unnecessary and the various properties taken over were released to be used by the ever-growing civil service, armed forces and allied forces although such was the confusion that it continued to be referred to for many months as if it were still a live plan. At the same time the three suburban War Rooms were completed although by now there was no apparent need

for them except as reserves in case the central London War Rooms were destroyed.

Paddock was a particular problem. In September 1940 Churchill personally decided that it should be prepared to receive the War Cabinet and preparations were made; but two months later he wrote in red ink on a memo asking him for instructions about domestic accommodation for the site that: "Paddock is a piece of useless folly. It can be put to any use Departments think fit. It is no good for HMG."

As a result Paddock was effectively mothballed and its accommodation handed over to the Post Office. It kept being mentioned as a possible reserve accommodation for many months and was revived in March 1941 but more as a reserve accommodation for War Cabinet Ministers than for its original purpose.



COPY.

RECEIVED IN CABINET REGISTRY 14 NOV 1940

PRIME MINISTER.

Sir Edward Bridges asks for instructions about the proposed shelters for the flats at "Paddock".

The Office of Works have drawn up a new and somewhat improved scheme, with a greater degree of dispersion. They say however that it would not be advisable to tunnel into the soil there at "Paddock", because it would involve disproportionate expense and delay.

Sir Edward Bridges feels that we ought not to retain the flats unless we build the shelters.

My personal reaction is that we might be very glad of reasonably safe sleeping accommodation in the vicinity of "Paddock". The flats are worse than useless from this point of view. It is not possible to foresee what use may turn up for this Citadel, which has cost a mint of money. It would be a pity to impair its usefulness merely because we hesitate to incur an expenditure of £16,000.

(Intld.) E.C.S.

29th October, 1940.

Paddock is a piece of useless folly; it can be put to any use the Departments think fit. It is no good for H.M.G. (Intld.) W.S.C. 1.11.40.

Copy of the letter in the National Archives in which Churchill dismisses Paddock

New War Rooms

In October 1940 the Cabinet formally decided that the government machine would stay in London unless it was completely bombed out. This meant that safer accommodation would be needed. As many staff as possible would be housed in heavily protected Citadels or fortresses where they could continue to work during air raids while others would work in "steel-framed buildings". The latter were favoured as being more resistant to the blast effect of bombs than solid stone or brick-built buildings and because of their lighter construction the debris load on the basement air-raid shelters would be less.

In practice, as the Cabinet Secretary wrote in November, "... a new system of reserve War Rooms is being built up which really replaces the northwest suburbs scheme." He was referring to several heavily protected buildings which were being built in and around Whitehall. These were:

- The extended Cabinet War Room which was being strengthened with a "slab" of concrete three feet thick reinforced with steel rails (the protected area also housed the Air Ministry War Room). In late 1942 doubts were raised about the ability of the slab to resist more than a 500-pound bomb as, in the words of Sir Norman Bridges, the Cabinet Secretary throughout the war, "the safety of the Cabinet War Room and its illustrious inhabitants is a matter of importance." De Normann, however, obviously rather annoyed at hints that he had not done a proper job, said little could practically be done.
- The Admiralty Citadel which had been approved in November 1940 and would be built as a private venture rather than by the Office of Works. This would be used for the main Admiralty War Room and also house the Board, the War Registry and Operations and accommodate some 820 people.
- The Horseferry Road site which before the war had housed two large, partly underground gas holders. These were now each being filled with a three-level mainly underground bunker with a concrete roof up to twelve feet thick and became known as the Rotundas. A three-storey (later extended to five) steel-framed building was also built on the site. This site would mainly be used by the Air Ministry although the Ministry of Home Security's War Room was relocated to the North Rotunda. The Rotundas were designed so that they could be incorporated as the basements of new government offices at a later time.
- The Montagu House Citadel (also called the Montagu House Annexe and the Whitehall Gardens Citadel) was built on a site between Whitehall and the Thames. Before the war, work had started here on a major new building to house the Air Ministry but work was suspended in 1940 leaving a very large hole prepared for the foundations. The heavily protected telephone exchange known as Federal had been built on part of the site but the remaining hole could not be left otherwise it might collapse and consequently it formed an ideal place to build a new Citadel. As soon as it was ready it was occupied by the War Office War Group. After the war the original building was completed in two stages and is now usually know as MoD Main Building.

- Cornwall House, which is in Stamford Street close to the southern end of Waterloo Bridge, was heavily reinforced and was initially used as the reserve War Room for the Ministry of Home Security.
- The Faraday Building near St Paul's was occupied by the Post Office but Lord Beaverbrook, the Minister of Aircraft Production, who had been given the role of supervising protected accommodation, had in the un-civil-service-like words of Bridges "...had the two bottom floors of this building raped from the Post Office and fitted up as alternate headquarters for the Government including flats for Ministers."
- Beaverbrook had also planned the heavily strengthened Curzon Street House in Mayfair as a second reserve bolt hole for the Cabinet but it was usually described in official documents as a general reserve. The building was strengthened with a reinforced concrete slab designed to be proof against a direct hit from a 500-pound bomb.

The circular Rotundas stand out in this postwar aerial photograph

Although the air-raid shelter at Buckingham Palace had been reinforced, the palace was considered to be a vulnerable target. This led in 1941 to a suggestion that a flat could be fitted out in the disused Down Street underground station previously allocated to the Prime Minister. However de Normann thought this would be too far from the Palace and instead two flats were provided in Curzon Street House for the King and Queen, one on the fourth floor and the other below the slab

With the exception of the Admiralty Citadel and Cornwall House, all of these were ready for occupation by mid-1941. The Admiralty Citadel was ready by November of the same year.

Preparations for Crossbow

In late 1943 intelligence started to arrive concerning the "long-range German rocket development" which would soon become the V1 and V2 weapons. Thomas Padmore, a Treasury civil servant who like de Normann will feature prominently in this story, was asked to bring the matter to the attention of the Chancellor. Soon the inevitable committee was set up with the catchy title of the "Sub-Committee on the Maintenance of the Machinery of Government under Rocket Bombardment".

Little was known about these new weapons although the military thought they might have a ten-ton warhead, and the scale of destruction under what became code named as "Crossbow conditions" might be of the same magnitude as envisaged for a nuclear war a decade later. There was no question that the machinery of government would have to be kept going under the bombardment. The committee quickly dismissed the idea of a return to the Black Move as being impractical. Instead, when the bombardment started the most vital nucleus staffs would move into the Citadels.

The less vital staffs would use the steel-framed buildings whilst the rest would make do with whatever was left or simply be told to stay away. In mid-1944 the committee were suggesting that for an initial period of two to three weeks the protected nucleus need only consist of about 18,000, but if the bombardment reached into months this figure would increase to some 50,000. There was however only protected accommodation for around 12,500.

The concerns about the strength of the Cabinet War Rooms led to Bridges questioning the need for better-protected sleeping quarters for the Prime Minister. Churchill himself asked: "What is the condition of the Barn and Paddock?" Neither Bridges nor de Normann was aware of the Barn and finally found out from No. 10 that it was the code name for the headquarters of the Railway Executive Committee in the Down Street tube station which had also been fitted out to take the Prime Minister (then Chamberlain), his wife, a private secretary, a detective and a shorthand writer.

Churchill agreed to give up the Barn in favour of accommodation in the North Rotunda. The entire lower

The first section of MoD Main Building under construction. The Whitehall Gardens I citadel is under the construction area with the Federal exchange behind the tree bottom right.

floor of the most heavily protected building in London was then given up for Churchill, his wife, servants and entourage. Later, rooms were found in what became known as ANSON for War Cabinet Ministers, a conference room, map room and a committee room for the Chiefs of Staff with BBC broadcasting facilities.

In looking for Citadel accommodation the planners' eyes quickly fell on the deep tube shelters. Eight of these had been built between 65 and 120 feet under central London and could each take 8,000 shelterers. The Goodge Street shelter was already used by the Americans and after some debate at the highest levels in early 1944 it was decided that all the others would be reserved for government use. Beds were partly removed from most and the shelters at Chancery Lane and Clapham Common were fully fitted out to serve as reserve Citadels for up to 600 people each.

In the event the V1 and V2 attacks were not as destructive as envisaged and the detailed plans were never put into operation. By the end of 1944 civil defence measures were being run down and in April 1945 they were completely stood down. The peace so long in coming would however soon be replaced by the Cold War which would occupy the minds of Government for the next forty years.

Planning starts for World War III

When planning started for World War III, the planners assumed that air attacks would be on a scale seen during the last war with, by the early 1950s, the added problem of a few atomic bombs. By 1955, plans were being made on the assumption that as well as 40 targeted at military sites, the UK's seats of government, industry and population would be hit by 132 atomic bombs with London receiving 35 bombs.

The planners predicted that these bombs would kill 1,680,000 people and injure another 957,000. Two-fifths of the country's houses would be wrecked and half of the manufacturing industry would be destroyed or damaged. The loss of life, casualties and damage would be horrendous, but based on experience from the Blitz and the attacks on German cities like Hamburg and Dresden, the attacks would not result in the breakdown of society or the system of government. Consequently, civil defence measures were only needed to help the survivors in the immediate "life saving" period to cope with the immediate and localised effects of the attack.

There were many other studies during the Cold War into the expected effects of an attack on the UK. The one prepared as part of the 1960 Home Defence Review said that any forecasts must be speculative "...but there is no doubt that the Soviet Union could effectively knock the United Kingdom out of a war involving the whole of the Western Alliance. If both nuclear bases and cities were attacked on the scale assessed, there might be over 20 million deaths and 4 million other serious casualties if there were no general evacuation or provision of shelter. Four to five million people might be saved if a scheme for evacuating six million people had been carried out, and millions of casualties might be avoided if it had been possible to provide adequate shelter from fall-out. There might be sufficient food for the survivors, though there would be serious distribution problems; water, power, transport should suffice for basic needs...It would be useless to try to relate home defence planning to a particular scale or type of attack but any attack should clearly be assumed to cause widespread destruction and casualties."

The main difference now however was that this scale of attack would lead to total disruption of all forms of communication, society and the economy. Normal life including government would cease.

Planning for all levels of civil and home defence was restarted in 1948 at the start of the Cold War. This naturally included thinking about the high-level direction of a future war and led to the setting-up of the "Working Party on the Staffing and Accommodation Plan for the War Cabinet Secretariat" which reported in February 1949. It proposed setting up at the start of a war a combined Cabinet Office and Ministry of Defence secretariat with 974 staff and an essential nucleus of 274.

As with World War II, the expectation was that the war would develop over months and the figure of 974 would be reached only after some three months. They would work above ground in the new public offices in Whitehall but as insurance against minor attacks, as much accommodation – both working and domestic – would be reserved in the old Cabinet War Room (at this time used mainly for storing historical records) as possible, although the report noted correctly that there were rumours that the safety of the place even under the slab was not all it might be.

After consultations between Thomas Padmore at the Treasury and the now Sir Eric de Normann at the Ministry of Works who we met earlier, de Normann suggested the empty South Rotunda as wartime protected

accommodation for the Cabinet Office. This was accepted and planning started. The Rotunda would not be prepared in advance and only used as emergency accommodation during air raids. In lulls the staff would return to the New Public Offices – as long as the building was still standing – by walking along the cable tunnel. The Cabinet Office asked for the North Rotunda but the middle and upper floors were already fully fitted out as the Home Security War Room.

The Home Security War Room in the North Rotunda dated from the last war. In February 1953 *The Times* reported that, as well as the new Regional War Rooms which were being built in the civil defence regions to provide the Regional Commissioners with a protected core from which to conduct civil defence operations, a Central War Room would be established. *The Times* also said that "information from all departments with civil defence responsibilities would be collected and collated" in this Central War Room.

An official report at the time said: "It is proposed that the Government will establish an operations and intelligence centre in which information affecting all departments with civil defence responsibilities would be collated and from which advice and information would be distributed and instructions on such matters as inter-regional reinforcement issued." This facility was usually referred to as the Central Government War Room or CGWR and until the late 1990s it was thought by some researchers to be the new Cabinet War Room. The CGWR would later be absorbed into the CGWHQ but the North Rotunda was used in the 1950s and beyond for exercises.

SCOUT

By mid-1950 active planning was under way to equip the South Rotunda for a central nucleus of between 500 and 600 people in two stages. Firstly, a very short-term plan for the key players with minimum alteration and accommodation, and secondly a longer-term plan to take all, although it was now thought that it could only provide both working and living accommodation for around three hundred.

By autumn 1951 work on the first stage was complete and the facility – which had been given the code name SCOUT – was included in the Cabinet Office War Book as the Cabinet Office War Room. However, the planners continued to debate the exact numbers required for the permanent nucleus and whether this would be in SCOUT or a new facility called PIRATE, of which more later.

While SCOUT was being prepared specifically for the War Cabinet and its staff, the Cabinet Defence (Transition) Committee considered the location of the seat of government and the evacuation of government departments from London. They decided that in the short term this could not be considered in isolation from the proposed plan to evacuate the so-called priority classes (mainly children) from London and, as this meant that the majority of people would be expected to "stay put", there could be no question of Parliament and the seat of government leaving. With this in mind the Committee thought that any opportunity to improve the deep-shelter accommodation for the nucleus of government should be taken.

In the longer term it was assumed that the Russians would have atomic bombs which would require different plans but consideration of these could be deferred. In June 1949 de Normann and Padmore met to discuss the evacuation which led to de Normann suggesting a virtual repeat of a Yellow-type move with the remaining less-essential parts of the machine staying in London using the steel-framed building, while the Central Government nucleus worked from protected accommodation.

De Normann was also anxious to warn of the problems which emerged at the start of the last war and in particular to keep the discussions in the hands of a few officials. He warned that planning ten years earlier for the central nucleus had found that a large number of organisations had to be considered such as Parliament, Royalty, the Diplomatic Corps and the major industrial and business concerns. He also pointed out the fundamental practical question of whether or not the nucleus should live in the protected accommodation or sleep elsewhere with the possibility of their not being able to reach their offices.

The Committee thought that the non-essential staffs should be evacuated from London, perhaps before hostilities as part of a general movement away from London, but that the seat of government should remain as long as possible for reasons of morale although – and significantly for this story – alternative accommodation should be prepared in or close to the London area.

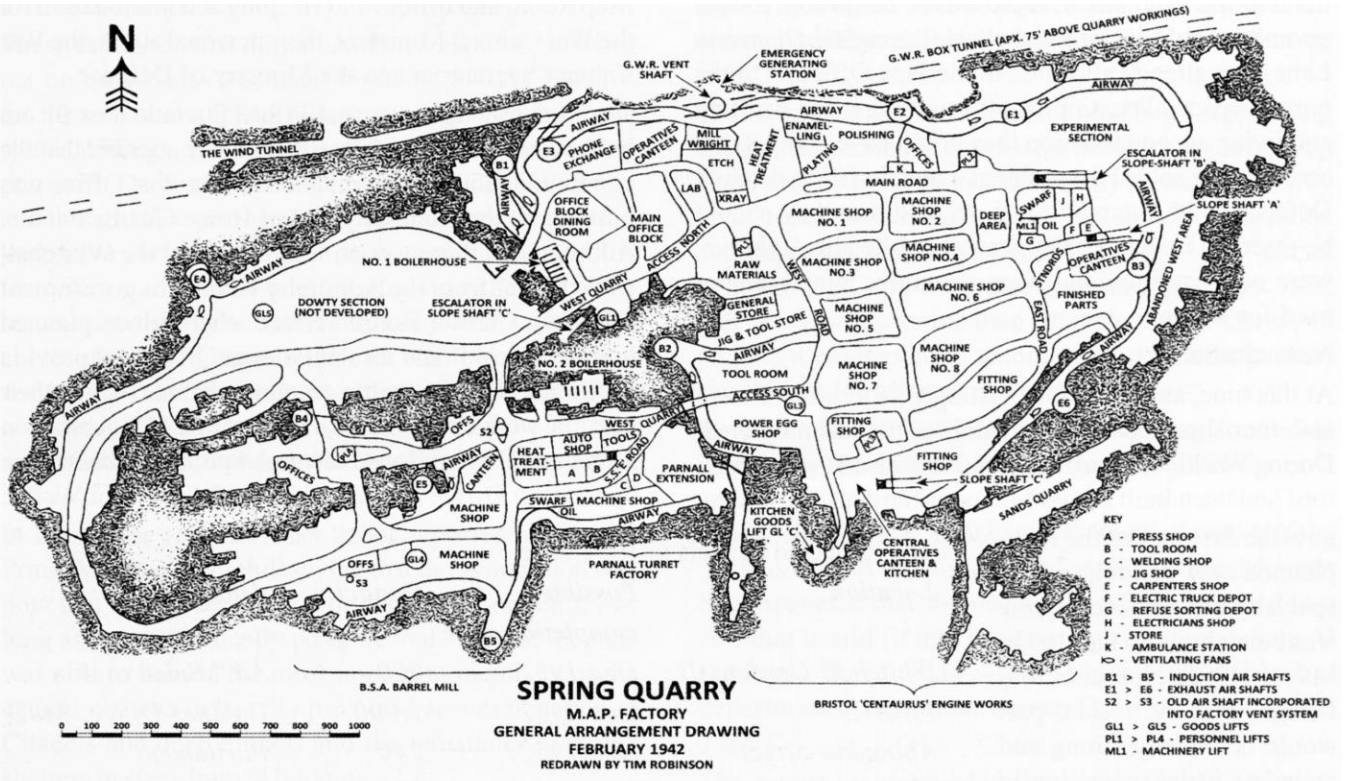
Early ideas from the Playfair Committee

The Cabinet Defence (Transition) Committee decided that these ideas should be developed and so in 1950 it set up the Committee on Distribution of Government Staffs in War (known after its Chairman as the Playfair Committee), and asked it to prepare an outline plan for the distribution of Government staffs in war . The Playfair report, submitted in April 1951, recommended that all the Government staff in Whitehall should be divided into four categories:

Category A – This would consist of the 25,000 least essential to the war effort and would be evacuated from London before the outbreak of war to make room for expanding departments (this idea actually dated from 1948 and was based on wartime experience).

Category B – Would consist of a further 20,000 to be evacuated later if necessary.

Category C – Was made up of about 75,000 people who would stay in London for as long as they could reach and work in their offices taking cover in air-raid shelters as necessary.



P4 Plan Spring Quarry the site of the CGWHQ during World War II

Category D – Consisted of an essential nucleus of 17,500 government staff that would stay in London as long as the seat of government (that is the War Cabinet and the other major decision-makers) was there. An additional 3,000 key staff of non-governmental essential organisations would also have to be included although this figure could easily reach 10,000.

The report was generally accepted and Playfair's Committee set up a sub-committee called the "Committee on the Location of the Seat of Government in War", under the chairmanship of Eric de Normann, to specifically consider the accommodation that might be needed. It proposed that A and B Category staff would be evacuated to provincial towns and cities like Cheltenham and Bletchley Park where they would double up in existing temporary office buildings mostly put up during the Second World War.

Category C staff, if evacuation could be delayed, could move into new office accommodation which would be specially built for them, but if not they would have to use requisitioned premises, particularly hotels in south and southeast coast towns. The committee found that around 5,000 Category D staff could be accommodated in existing Citadels or deep tunnels dating from the last war and a further 8,100 in strutted strengthened offices.

The London Citadels in 1951 were:

Location	Floors	Sq ft	Capacity	Proposed allocation
Monck Street	2	12,006	200	MI5, MI6
North Rotunda	3	34,298	570	Home Office, CGWR, Scottish Office
South Rotunda	3	25,662	420	Cabinet Office, MoD
Whitehall Gardens	2	32,764	550	War Office
Admiralty Citadel	2	35,819	600	Admiralty
New Public Offices	2	82,755	1,380	Air Ministry
Curzon Street House	3	13,342	220	Ministry of Transport
Dollis Hill	2	9,441	150	London Region War Room
Cricklewood	2	17,467	290	
Harrow	2	15,130	250	
Geological Museum	1	2,787	45	

Rather surprisingly, although de Normann had mentioned them to the Committee, there was to be no role for the seven available deep-tube shelters (the eighth, Chancery Lane, was already allocated to the Post Office). On the normal space allocation of 60 square feet for working and living accommodation they could have taken 8,400 and virtually solved the problem. Later, in 1951, the Civil Defence Joint Planning Staff decided that they should be reserved in war for the general public although they were never refitted and were generally left vacant or used for storage.

New citadels

At this time, as well as the existing Citadels, there were also four significant new Citadels or tunnels projected. During World War II a major bunker with a 10-foot-thick roof had been built on the Montagu Gardens site and by now the first part of the long-planned new building with a specially strengthened frame was being built on the site. In May 1949 de Normann told Bridges that the second part would be equally strong and include Citadel protection in the basement to take 950 mainly Air Ministry staff. This would become known as the Whitehall Gardens II Citadel.

Unlike during World War II, the planners thought it would be necessary to provide protected working accommodation for at least a core of both Houses of Parliament. A site was already earmarked for a new office block in Abingdon Street close to the Palace of Westminster and the proposal was made to bore a single-level tunnel providing a Commons Chamber for some 187 members and a Lords Chamber for fifty. The third site was to be a protected deep-level basement under a new building planned for the Colonial Office off Broad Sanctuary near Parliament Square.

This building and its Citadel would have a troubled history. The Citadel was started around 1951, but plans for the building were abandoned in 1952 and although they were reinstated some years later to become the Queen Elizabeth Conference Centre, the Citadel was never finished and never appeared in the final "order of battle" of the London Citadels.

By far the most ambitious scheme was codenamed PIRATE and appears to have arisen from some discussions in 1950. PIRATE would provide accommodation for the War Cabinet organisation in three parallel tunnels with lateral communicating tunnels running under Horse Guards Parade.

Accommodation would be on two floors, 23 and 16 feet wide respectively, and eight feet high. It would be designed to accommodate 800–1,000 people at 60–70 square feet per person and would include a meeting room for the Cabinet, Cabinet Committees and the Chiefs of Staff, a Map Room and offices and sleeping accommodation for the War Cabinet Ministers, their personal staffs, the War Cabinet Secretariat and the Ministry of Defence.

The initial thought was that PIRATE would cost £1.6m but it would never be built, although it is possible that the communications tunnel planned for the Post Office was built under the Admiralty end of Horse Guards Parade. Additionally, there was an idea to extend the Whitehall cable tunnel from the Admiralty Citadel to government offices in Carlton House Terrace where it was planned to build a new home for the Foreign Office and provide additional Grade A shelter accommodation. To hide their cost, the work on the tunnel projects (PIRATE, Abingdon Street and Carlton House Terrace) would have been done by the Post Office and repaid by the Ministry of Works.

The Projected citadels in 1951 were:

Location	***Possible completion date***	***Capacity***	***Allocation***
Whitehall Gardens II	*Dec 1952*	*950*	*Air Ministry*
PIRATE	*Dec 1952*	*1,000*	*Cabinet Office, MoD*
Abingdon Street	*Dec 1952?*	*240*	*Parliament*
Carlton House Terrace	*?*	*230*	*Foreign Office?*

SUBTERFUGE

The key idea at this time was that the nucleus would stay in London. But as Norman Brook, the Cabinet Secretary reported to Prime Minister Atlee in April 1951, "London might... become completely isolated and out of touch with the rest of the country; and in that event there would be no object in keeping the central machinery of government underground in London. We are therefore beginning also to consider the possibility of providing some alternative seat of government in another part of the country and equipping it in advance with the necessary accommodation and communications."

This was however too secret to commit to paper and Norman Brook planned to tell the Prime Minister about it in person. This was a scheme known as SUBTERFUGE and was in fact already being considered in great secrecy by a committee. The report added that accommodation for Royalty would be dealt with separately, but said: "The situation at Buckingham Palace should be satisfactory but we shall have to consider what additional arrangements would be needed for the protection of Princess Elizabeth and other members of the Royal Family."

In mid-1951 Playfair called together a small, select group including de Normann to consider an alternative location for the nucleus should London become uninhabitable. They met in July and were told, probably by de Normann, that "There was accommodation for about 27,000 in three of the larger chambers at SUBTERFUGE. The Admiralty and Ministry of Supply also had claim to this

accommodation and ammunition was stored near the three that were most suitable."

The meeting felt that they should seek authority to work out on broad lines a scheme for using SUBTERFUGE for the essential nucleus whenever it was needed for D staffs, although until then it could be used for its existing purposes. De Normann visited the SUBTERFUGE site and thought the scheme to be practical but it then took a year for a survey and report to be completed. By this time Norman Brook was saying that the previous assumption that the nucleus could carry on in London for at least the first three months of a war looked doubtful and he was thinking that preparation of SUBTERFUGE – especially communications – should be started immediately although knowledge of the scheme should be kept to a very small number.

In December 1951 Norman Brook reported to the new Prime Minister Churchill saying that the assumption was now that the Government would stay in London for as long as it was physically possible to do so, and the plan was still to house "the most important members of the central nucleus in heavily protected accommodation in Citadels and deep tunnels and the remainder in strong shelters in steel-framed buildings."

These basements would be reinforced with steel strutting in peacetime and in war a two-foot thick layer of earth or sand would be spread over them against radiation. But he again hinted of "alternative accommodation elsewhere" and again preferred to brief the Prime Minister orally. Intriguingly it seems that part of the protected accommodation would be available for the Sovereign – but as usual all references to her are redacted and this is only an inference.

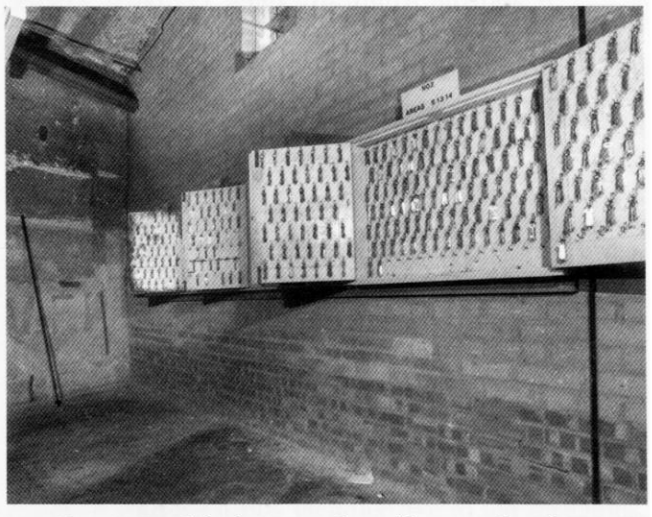
Later that month a very high-powered group consisting of the Prime Minister, several Cabinet Ministers, the Chiefs of Staff, the Cabinet Secretary and de Normann discussed the plans for accommodating the central nucleus in war and concluded that no new work should start on any Citadel or tunnel accommodation – including PIRATE – and the essential nucleus should be reduced in size from the planned 17,500 to the 5,880 who could be accommodated in the existing accommodation and the Whitehall Gardens II and Colonial Office sites. The Distribution of Government Staffs in Wartime Committee was subsequently asked to consider the numbers required for the nucleus. However, more significantly and possibly contrary to the Prime Minister's wishes, de Normann was asked to prepare a report on a revised version of PIRATE and another on SUBTERFUGE.

In May 1952 the Playfair Committee on the Distribution of Government Staffs submitted an alternative proposal for the nucleus. They said that departments had reviewed their needs but this only allowed for the reduction in the nucleus Category D staff from 17,500 to 7,800 and at that time there were only 4,700 places available protected to the desired level. They thought that a nucleus which would include support staffs would have to number at least 13,000 and recommended that more protected accommodation should be built in London, including PIRATE.

The committee also mentioned the possibility of providing alternative accommodation for the nucleus outside London and SUBTERFUGE was increasingly seen as potentially vital. Its actual role was however still under consideration and knowledge of it was kept to a very small circle, although the Committee recommended in August 1952 that work on an immediate plan should be started to prepare it as alternative accommodation for the nucleus should London become untenable.

In September 1952 Playfair's Distribution Committee issued a revised report. It said that the bulk of the civil service should continue to work in London as long as it could, and then be evacuated if bombed out, but the nucleus should remain in London. The Prime Minister had instructed that the nucleus should be reduced to a size that would fit into the existing accommodation. At the time there were 4,715 places available but departments' minimum demands for places came to 7,800.

The report recommended that work should begin on PIRATE and the Colonial Office and Whitehall Gardens Citadels and strengthening basements as soon as possible. This would result in 12,500 protected places by the end of 1955. The report then continued: "In case London proves untenable there must be some protected alternative for the Government and its essential nucleus of staff. Fortunately, the bare bones of one exist in SUBTERFUGE..." and they recommended that work be started on it immediately. This statement was based on the report which had been made on SUBTERFUGE by the Ministry of Works mentioned earlier.



Just some of the huge number of keys used in the site. Photo Nick Catford

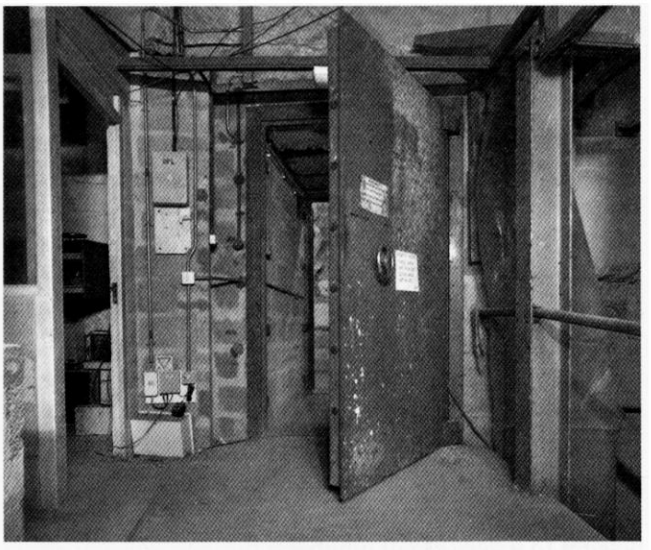
The report had considered five quarries in the Corsham area of which Spring Quarry was the "obvious first choice". It was occupied by Ministry of Supply and Admiralty stores, was still held on its wartime requisition

for the Ministry of Supply and had the largest developed floor area as well as adequate mains services and means of access. However, the local electricity supply was considered vulnerable and underground generators would be needed. Similarly, the water supply was vulnerable and whilst water was supplied from a large reservoir in Corsham, there was no underground storage although there was an underground spring which could be used and a 100,000 gallon reservoir was suggested.

This report was based on accommodating an arbitrary figure of 12,000 and suggested that SUBTERFUGE could be developed in two stages:

1. An austerity scheme which could be carried out with the minimum of work and expenditure to prepare the eastern end of Spring Quarry as offices; this would take about six months. This would occupy some 925,000 sq ft (exclusive of roadways and pillars) and would allow 75 sq ft per head of office space which compared well with the standard figure used in the protected accommodation in London. The staff could live in the existing surface hostels and houses although their existing occupants would have to be rehoused. As this might be difficult, crash plans should include providing sleeping accommodation underground at a basic level for say 6,000.
2. A longer-term plan to provide underground living and working accommodation over two or three quarries which would take about two years to complete. This would spread the risk of a knock-out blow from a chance bomb and avoid the need to use any surface accommodation. This would require 1,790,000 sq ft. (at the time the Ministry of Supply storage areas occupied 1,476,000 sq ft and the Admiralty ones 772,000). Office spaces would be partitioned but not to ceiling height to allow for air circulation and save money. Staff would sleep in tiered bunks. This scheme would need the whole of the developed area of Spring Quarry as well as Monk's Park, Westwood and Hayeswood quarries although these were up to nine miles from Spring Quarry. As the report's conclusions added: "There should be no illusion about the standards of working and living conditions which we propose; they will be hard and uncomfortable in the first instance and will never be easy even if our long-term plan is carried out."

However the senior civil servants were still lobbying for PIRATE and there was at least one suggestion that it could go ahead by fudging its approval and budget. SUBTERFUGE was discussed by the inner clique again in November 1952, although the Note for the Record refers to it as "a place outside London to which the essential nucleus of central government could be moved..." It was decided that although it would take some three months to clear the Ministry of Supply's stores from the site, any physical preparation such as conversion to office accommodation could be left to be done during "the period of alarm" but that some general work such as heating, lighting and drainage should be carried out as and when possible. But it was stressed that the scheme must remain known only to the minimum number as there should be no general idea that the government contemplated leaving London.



Door 50, the main entrance into the CGWHQ areas in recent years. Photo Nick Catford

In any event SUBTERFUGE was not to be seen as an alternative for protected accommodation in London including PIRATE. By February 1954 the Ministry of Works were seeking Treasury approval for initial spending although they had not received Treasury or Ministerial authority for the whole scheme which was "...known as SUBTERFUGE about which we have been forbidden to say anything on paper if we can possibly avoid it." They received initial authority to spend £100,000 on reservoirs and an emergency water pipeline, improved approaches, mains drainage, the ring (blast) wall, lavatories, and canteen equipment.

The Padmore Working Party

In early 1953 a Home Defence Committee made up of the Chiefs of Staff and some very senior civil servants was set up under the chairmanship of Cabinet Secretary Norman Brook "to ensure the consistency in war planning by military and civil agencies of government which is directed towards the defence of the United Kingdom in a future war." They then set up the Hall Committee to consider the effects of an attack on Britain using 200 atomic bombs. This in turn led to the setting-up of the Working Party on the Machinery of Government in War under the Chairmanship of the now Sir Thomas Padmore which first met on 1 October 1953.

The Committee included the soon to retire Sir Eric de Normann who was able to give the Working Party the benefit of his nearly twenty years of experience. The task of the Working Party was to consider the machinery of government in the initial stage of an atomic war based on the conditions predicted by the Hall report (which had seen the need for a strong government possibly outside London). This effectively replaced the Committee on Distribution of Government Staffs which continued to exist on paper although it had only met three times in 1952 and not after. It was finally dissolved in 1955 as part of an exercise to clean up committees.

Padmore posed the question of what would happen to the "Central Government machine" on the assumption that it stayed in London under atomic attack. Could it continue and if so what would be its role? Should a shadow Government be created outside London?

The consensus was that, as before, for morale reasons the nucleus should stay in London where, if the attack made them inaccessible by road, they could be supplied along the Thames or even by helicopter. But such a small nucleus could only handle the most essential government business concerned with the prosecution of the war. Everything else such as education would be controlled from SUBTERFUGE where a "second eleven" of up to 12,000 ministers and officials (C staff) would establish themselves before the war started and which could take over if necessary.

The Padmore Working Party still worked on a figure of 12,000 for the nucleus but there were still only 5,360 Citadel places and these included the Colonial Office Citadel which was nearing completion, the Whitehall Gardens II Citadel which was under construction and the still unapproved PIRATE which would take some three and a half years to complete if instructions to proceed were given. Even if all the projected basement schemes were included and approved immediately there would still only be 7,670 places by 1958. This would exclude the basement of the Great George Street building which did not have a steel frame and was thought unlikely to survive an atomic explosion.

SUBTERFUGE was high amongst the Working Party's thoughts. De Normann presented the earlier report on SUBTERFUGE adding that the work on it could be done covertly under the cover of its known storage purposes. The early idea of keeping SUBTERFUGE partially empty ready to take the nucleus if it left London seems to have been overruled in favour of filling SUBTERFUGE at the outset. If the nucleus had to move from London a similar number of SUBTERFUGE's existing occupants would simply have to go elsewhere.

The Working Party made its first report in November 1953 and suggested that "The nucleus Government must include the minimum number of Ministers (including the War Cabinet) and officials necessary to control the higher strategy of the war, foreign and Commonwealth relations and the major issues of home defence. Everybody else must go." It went on to say that previous estimates suggested a minimum number in the nucleus of 12,000.

This number could not be housed in the London Citadels so consideration should be given to housing a second group of officials and Ministers, the next most intimately concerned with the conduct of the war, in one protected place, and the only suitable place was SUBTERFUGE. SUBTERFUGE would also take some extra-governmental bodies such as the Bank of England and the TUC. The group in SUBTERFUGE would support the War Cabinet in London and act as the Central Government for all matters not handled in London. It would also take over if the London nucleus was out of action.

The Working Party recommended that a third echelon of some 30,000 should go to the "Sterling Area" in what would have been basically a repeat of the wartime Black Move. Parliament would be needed at least at the start of the war but it should not meet in London but possibly somewhere near SUBTERFUGE or somewhere like the Shakespeare Memorial Theatre in Stratford earmarked for the purpose in World War II. If it was decided that Parliament should stay in London then they recommended building a Grade-A basement in the proposed Abingdon Street building rather than a tunnel scheme.

By early 1954 the hydrogen bomb had begun to enter the equation and the Home Defence Committee asked Padmore to reconsider his report in the light of the greater damage such bombs would cause. The working party now suggested reversing the morale argument for the nucleus staying in London suggesting now that the public would be more adversely affected if the Government machine were destroyed in London than if it evacuated itself. It also recommended reversing the order for evacuation.

Under their earlier recommendations the least important civil servants would have left London first, with the nucleus the last to move. Now they suggested that the nucleus should go first and priority should be given to its protection and preservation. It was clear that the H-bomb would make any use of the London Citadels impractical but in a move typical of civil service planning, further consideration of them was deferred pending more information.

SUBTERFUGE was thought to be safe from an atomic bomb but now the RAF said that it would be destroyed if attacked with H-bombs yielding five to ten megatons. They also had concerns about the possible effect on SUBTERFUGE of an explosion in the nearby ammunition depots. This led the Ministry of Works to look for alternative underground sites.

None were found that were fully satisfactory although the Billingham Anhydrite Mine – which was some 900 feet deep – was considered the best alternative. However the only access was by way of shafts rather than slope tunnels or adits and this was considered to be a major disadvantage. The Drakelow Underground Factory near Kidderminster was considered but thought to offer inadequate protection and the Manod Slate Quarry was dismissed as too small. A subsequent search found the Meadowbank Salt Mine in Winsford, Cheshire and the Cocklakes Gypsum Mine, near Carlisle, but again neither was thought to be better than SUBTERFUGE.

London is abandoned

After considering the Working Party's ideas, the Home Defence Committee thought that for political reasons a nucleus of Government would have to stay in London, but the rest of the Government machine should be dispersed together with the maximum amount of devolution to the regions so that if London were destroyed there would still be a Government. However, and very bravely, Padmore stood up to the Cabinet Secretary and argued strongly for moving the nucleus from London and asked for guidance from the Cabinet. He was now proposing that the London Citadels be maintained to allow a Government to stay in London if it wanted to, but as a precaution he now suggested that two underground headquarters should be prepared in the country away from London.

In October 1954 Padmore's working party felt able to submit a rewritten report to the Home Defence Committee reflecting the scale of damage and dislocation expected from a war involving H-bombs and the increased vulnerability of the London Citadels. The main recommendations were:

- It would be impossible to maintain a Government machine anywhere comparable with peacetime practice so it should be reduced to the absolute minimum. This would involve abandoning large parts of what are normally considered as essential functions and devolving as much as possible of the rest to regional centres to be based on joint/civil military headquarters, the precursors of the Regional Seats of Government to which some ministers and officials might be sent in advance.
- The Citadels were vulnerable. If central London were attacked they would be destroyed or their occupants entombed. There was also a risk of flooding from the Thames as most were below river level and their communications were vulnerable.
- Although the central London Citadels should not be used, consideration could be given to using for a small nucleus the three small peripheral World War II Citadels which were less likely to be destroyed.
- The working party believed it was impractical to reply on the Citadels, but to avoid the need to commit to one course, an alternate centre outside London should be prepared which could take over if the Government of the day decided to move or was knocked out.
- The main part of the nucleus and their support staffs would move at the same time as the regions were reinforced to provide cover. Any remaining nucleus in London could quickly leave in cars and coaches.
- There was no intention of a mass move of Government staff from London. The remainder of the civil service would be expected to work as long as possible and then be ready to respond if some call came in the recovery period.
- Parliament would disperse before the attack to meet later at a pre-determined place. (Later this idea was changed to one where arrangements for reassembly would be on an ad hoc basis determined at the time.)
- Two underground headquarters would be prepared in the country. One would be SUBTERFUGE.
- Plans for the nucleus would only be on paper. No actual preparations would be made (it was still thought at this time that there would be at least six months' notice of a war allowing sufficient time for actual preparations to be made).

In January 1955 Ministers agreed this general scheme although the idea that the peripheral citadels had a use was dropped. The Home Defence Committee also suggested that the second headquarters should be at Drakelow but it would be kept empty, and it rather than SUBTERFUGE would receive the seat of Government if it left London.

East Main Road. Photo Nick Catford

The hydrogen bomb was by now increasingly entering the equation and in late 1954 a "committee of officials" under the chairmanship of William Strath was set up to consider the effects of fall-out which up to then had been little considered.

The Strath Committee produced its report in March 1955 based on the effect of ten hydrogen bombs each of 10 megatons on UK cities, and its findings had a huge impact on all areas of home defence. The immediate effects would be on a biblical scale with 16 million dead or seriously injured. The destruction would affect half the country and, for example, forty percent of industry would be wrecked.

But fall-out would have longer-term effects. It would blanket the country, pinning millions of people to their houses; movement would be impossible for days if not weeks; communications would have been severely disrupted by blast effects and repairs would be impossible; food could not be moved and casualties could not be treated. Normal life including Government would be impossible and would cease.

The war, at least in Europe, would be over in days as both sides were reduced to concentrating simply on the "struggle for survival", as it was described. Avoiding a war by developing the deterrent became paramount and it was soon decided that everything in home and civil defence that was not supporting the deterrent would be put in abeyance. This would not however apply to protecting and preserving Central Government.

Padmore rewrote his report again to take account of the Strath conclusions. There would still be the two underground sites. One, probably SUBTERFUGE, would be a reserve to which a small group of ministers capable of taking over the struggle for survival would go in advance of the attack. The other site at Drakelow – now code named MACADAM – would be prepared to receive a small nucleus of around a thousand often referred to in the files as "the second eleven". And as London was almost certain to be attacked and the Citadels would be inadequate the nucleus must move, albeit at the last moment, and go to SUBTERFUGE which had been made ready and join the group already there.

Under the original plans the support staff would not join the nucleus underground but be accommodated in surplus buildings on the surface. Now this was dropped in favour of accommodating the support staff in the same protected underground accommodation at SUBTERFUGE. The nucleus would now not be concerned with fighting a lengthy world war. Its role would be restricted to "a streamlined machine restricted to the discharge of such functions as would be essential to national survival and recovery." The central government would only take the most important, strategic decisions.

The bulk of the Government machine – the old Category A, B and C staffs – were now not part of the equation. Government was now about survival not organising the daily life or even fighting the war. In the following years the fate of these civil servants was considered on several occasions but the usual idea was that they could be left to fend for themselves.

Padmore also considered the impact on the regional organisations. There would now be an even greater need for strong government in the regions and the idea of combining the civil Regional Commissioner's staff with the army district headquarters was put forward to become a joint civil/military headquarters accommodated in heavily protected accommodation. Staff numbers would initially be limited to 300–400 but this would rapidly expand from local recruitment as conditions improved. However, due mainly to lack of funding, the regional headquarters were not developed and although plans were drawn up for specially-built headquarters, in practice existing buildings would have to be used – modified as and when possible. By the early 1960s these had evolved into the Regional Seats of Government and although every region had an RSG not all of them were considered to be fully operational.

The Prime Minister approves the CGWHQ

The revised plan was formally approved by the Prime Minister (Anthony Eden) in September 1955. This led to a letter from the Ministry of Works to the Treasury asking in classic civil-service language for formal approval of the £1,200,000 expected cost and saying "I am directed by the Minister of Works to state for the information of the Lords Commissioners of Her Majesty's Treasury that a scheme for the wartime accommodation of the essential nucleus of Her Majesty's Government has been approved by the Prime Minister. The Minister of Works has been instructed to put the work in hand subject to the normal procedures for financial control..." The work "...involves the preparation of underground space, formerly in use as a wartime factory, for use as office space, living and sleeping quarters for Ministers, senior officials and ancillary staff numbering 4,000."

The £1,200,000 excluded furnishings and communications expenditure. £400,000 of it was for surveyors' services including the walls, the protection of ventilator shafts and the provision of emergency storage underground and £800,000 for engineers' services including ventilation, refrigerating, dehumidifying and the conversion of plant. No provision was made for office and canteen equipment which was estimated at £50 per head. The figure of 4,000 was an arbitrary one based on a rough estimation of the numbers that the site – which was now to be restricted to part of Spring Quarry – could accommodate. However it quickly became accepted as the maximum or target figure and would influence all future planning.

By mid-1956 Padmore started making detailed plans and was writing to all the government departments asking them what, if any, role they foresaw for them in the central

nucleus, and how many places they wanted. He added that his Working Party were not looking beyond what would have to be done in the first month or two after attack. The government for the recovery after this period would be left to be decided at the time.

It seems that up to this time little thought had been given either to the work the departments would be doing from SUBTERFUGE nor to the numbers of people they would want or need to do it. The departments, never ones to downplay their roles, came up with figures which seem to have taken Padmore by surprise and a lot of juggling of numbers was made over the next few years to keep under the magic figure of 4,000.

Roadway, Area 11

The work begins

Padmore's Working Party delegated the task of making the detailed plan of the organisation, staffing, functions and layout of the seat of Government in war to a new planning team set up under A J Platt, another Treasury official. The tasks given to the planning team illustrate the sheer scale of the operation. They would:

- Identify the facilities and services needed to enable all the staff including the War Cabinet to perform their functions.
- Quantify the requirements for accommodation, equipment, material and personnel.
- Work out how the headquarters would work as a whole
- Plan the physical layout of the headquarters.
- Determine the best methods to man the headquarters and draw up a mobilisation and transport plans.
- Plan for the peacetime maintenance of the site.

The initial working assumptions set in 1956 by the planning team of what was by now becoming recognisable as the Central Government War Headquarters were:

- There would be a central nucleus of 1,000 decision makers
- Supported by communications and common services staff
- In self-contained accommodation for 4,000
- With the fullest practical protection against blast, fall-out and gas
- There would be 250 individual combined office/ bedrooms for senior staff
- 150 rooms would be offices for 3–4 people and
- the rest of the working accommodation would be divided into large rooms to hold upwards of 50 people
- Apart from the senior staff everyone would sleep in bunked dormitories
- The male to female ratio would be three to one
- There would be two canteens, one to cater for 2,000 on a 24-hour three-shift basis, the other catering for 2,000 working a long day
- There would be three War Rooms – for the central Cabinet War Room, a civil defence War Room and a Commanders in Chief War Room. Other smaller war, operation or map rooms were suggested for such active departments as the fire service, MAFF, Ministry of Transport and Civil Aviation and the Commanders-in-Chief UK Committee
- Accommodation would be on a strict utility basis with no special rest or recreation rooms.

One fundamental problem that the planning team had to consider at the outset was how the headquarters would work at the basic level. Two fundamentally different concepts of how the seat of Government (including the regional headquarters) would function in war had emerged. The first had the seats of Government, both national and regional, operating as a single command headquarters (the "command concept"), whereas in the second they would work as in peacetime as an aggregation of departmental representatives with individual ministerial responsibility and departmental staff reporting to Ministers and senior staff at the centre with the Regional Commissioners only acting as coordinators.

This departmental approach had served in World War II but the Working Party considered it would not work in World War III. Their interim report submitted in May 1956 said they had decided to go for the simpler command system rather than a departmental one, i.e. orders would go from central government working as a unified decision-making body to the Regional Commissioners rather than from a departmental Minister at SUBTERFUGE to departmental representatives at the regional headquarters. The Regional Commissioner would be the absolute authority for the region and not just a co-ordinator of departmental functions.

But it seems to have been quickly realised that there was a serious flaw in the basic plan. The idea was that one site, probably the smaller MACADAM, would be fully manned in the pre-war Precautionary Period by 'the second eleven", whilst the other would only be prepared

ready to receive 'those exercising supreme control' evacuating from London at the last moment. But it was recognised that this second group might not escape especially as the Soviets had developed H-bomb-tipped ballistic missiles.

As work on MACADAM in the wartime tunnels at Drakelow was not to be started until SUBTERFUGE was complete, a process that would take several years, this could mean that there would not be a central Government at all if SUBTERFUGE were knocked out, especially given the unprepared state of the regional headquarters. So within a year the working plan had been modified and MACADAM was, to all intents and purposes, left out.

Given this problem the planning team recommended that SUBTERFUGE would be fully manned with the "first eleven" of Ministers and full support staff at an early time in the Precautionary Period ready to receive the Prime Minister and his final party. If the Prime Minister did not make it to SUBTERFUGE they would be able to act as the nucleus under the most senior Minister there. This change of emphasis led to the suggestion in 1957 that the MACADAM site could be used as the regional headquarters for Midland Region, the predecessor to the RSGs (Regional Seats of Government).

The new strategy would be dictated by the scale of the damage and the paralysing effect of fall-out. As many central Government functions as possible were to be devolved to the enlarged regional headquarters which would be responsible, now under the direction of a government Minister acting as the Regional Commissioner, for the day-to-day running of the country. Any Government function not vital to immediate survival would be put into 'cold storage' to be reinstated weeks or months after the attack. The much-reduced Central Government in SUBTERFUGE would confine itself to the most important, strategic matters. Implicit in this post-Strath strategy was the idea that SUBTERFUGE's role was no longer to direct the war. There would be no war to direct, only the survival and restoration phases which would follow the destructive phase.

The planning team suggested that for the day-to-day working of SUBTERFUGE there should be an inner core of Ministers and Chiefs of Staff, with their senior advisers and joint civil-military staffs and secretariats in immediate support. The various departmental support groups would then be sited around this inner core. On this basis there would be three groups:

A. The War Cabinet organisation – consisting of the Prime Minister and a small group of senior Ministers forming the War Cabinet – which would be in almost permanent session in a conference room overlooking the World Wide Map Room. In attendance would be the Chiefs of Staff and a combined Cabinet/Defence Secretariat. Total staff here would be about 140.

B. The home defence organisation for dealing with affairs on the home front and coordinating the work of the civil and military organs of Government and of the state corporations, private industry, etc. The team suggested that this should be headed by a Home Defence Official Committee formed from senior officers of the main due functioning departments such as the Home Office, Scottish Office, Ministry of Health, etc and the army's C-in-C UK Land Forces. It would coordinate activities and take decisions or refer them to the War Cabinet. They would need a conference room overlooking the "Home Front Map Room". This would primarily be an intelligence and display centre for regional reports. One task of this map room would be to plot the national fall-out situation using data from the national warning and monitoring organisation and in many ways it seems to have taken over the functions of the Central Government War Room. It would have 217 staff.

C. The overseas liaison and diplomatic organisation which would include the main military contingent and ambassadors, High Commissioners and foreign liaison staffs. These groups would be physically close to each other and the communications centre.

Outside the inner core areas would be:

D. The remaining staffs of the civil departments both due functioning ones and "cold storage" ones. The latter, for example the Inland Revenue, would not have any real function in the survival period.

E. The remaining staffs of the service and supply departments.

By July 1956 detailed plans were being drawn up and the contractors were starting work with the construction of a concrete blast wall between four and a half and six feet thick completely enclosing the working areas. Heavy reinforced concrete blast protection was also being provided at the heads of all vents, lifts, flues and escalators. At this time the infrastructure work was expected to take about three years to complete of which the first nine to twelve months would be largely taken up with planning and pre-contract work.

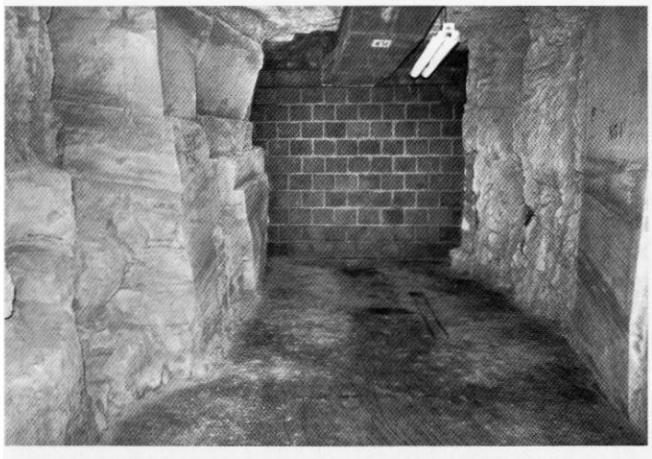
East Main Road by Area 13 looking west

The original cost estimate for the construction works and the plant (excluding furniture and communications equipment) was £1.2 million (roughly £30 million today). This however steadily crept upwards particularly as parts of the wartime factory's plant were found to be inadequate for the new requirements. The expenditure was, however, buried in the budgets of various departments and never came to the attention of Parliament or the press. This was at a time when defence expenditure was being squeezed and SUBTERFUGE probably accounted for up to ten percent of the entire home defence budget in the late 1950s.

At the time, apart from the underground posts for the Royal Observer Corps, the CGWHQ was the only significant home defence expenditure. It should have been paralleled by purpose-built regional joint civil-military headquarters and Sub Regional Controls to form a unified infrastructure for the machinery of Government in war but these were constantly deferred for lack of money. Even with its high status the work on SUBTERFUGE proceeded slowly with much of the delay caused by the interminable references to different committees and the need to have every cost overrun approved.

By 1957 the following major structures were complete:

- perimeter walls
- general partitioning
- the installation of various types of plant, the diesel generating sets to work the ventilation and lighting, laundry, bakery and kitchen equipment.
- installation of oil storage tanks
- three lifts and one escalator
- emergency water system
- emergency sewage system
- air conditioning and ventilation plant including filters to keep out radioactive fall-out
- internal communications systems including the Lamson tube network.

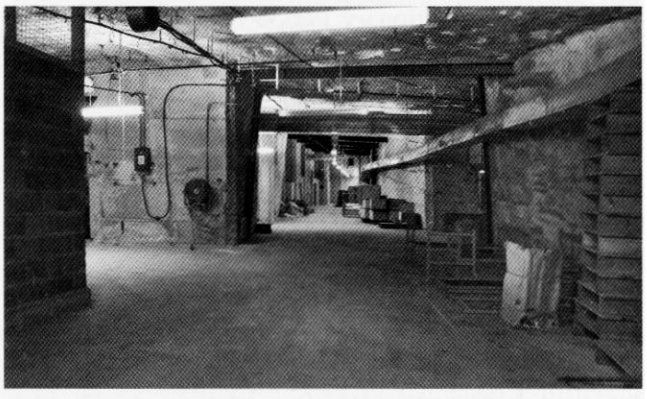


Blocked exit from Area 20. Photo Nick Catford

The work progresses

The Chiefs of Staff were concerned that until the CGWHQ was completed there was no protected or organised place for the nucleus. This led the Working Party to consider in early 1957 if the site could be used immediately. They decided that the key factor would be the availability of communications.

After an initial planning process which might take a month it was thought that the site could be made usable on a crash basis in a week, but that the communications would be limited and vulnerable. However the situation would be much better if six months were allowed for planning and preparation. The debate about crash plans dragged on into 1959 and became tied in with a campaign by the Home Office to accelerate home defence planning generally, which at this time was being prepared on a long time scale with very limited money.



Area 9

However, construction was sufficiently advanced by late 1957 for plans to man and operate from SUBTERFUGE to be included in the Government War Book which laid down all the measures needed to move the country to a state of war. They included the warning: "Measures necessary for the activation of the Headquarters would have to be improvised but doubtless the Headquarters would be manned after a fashion within seven days." However in late 1957 the work was slowed down as part of a general cost-saving exercise which affected the entire civil defence building programme.

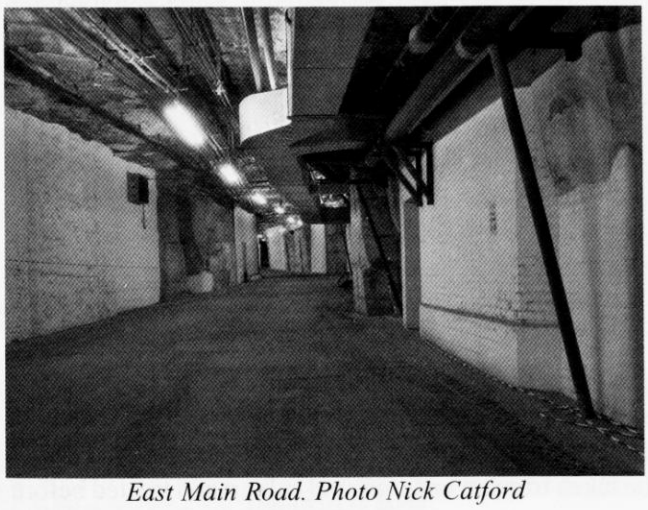
By June 1959, the project was about 65 percent complete and some £1.02 million had been spent. The bulk of the infrastructure was complete. The main work outstanding was the provision of concrete caps to the ventilation shaft heads, emergency water and sewage systems, air conditioning plant including the fitting of filters to prevent entry of fall-out, and the internal communication system. None of the new communications facilities had been installed, but a 500-line automatic exchange with a 4-position manual switchboard already existed at the site as a legacy from its wartime role, together with a separate 12-position switchboard to provide trunk and local services. The external communications systems although being planned were not due to be installed until the structural work had been completed.

Area 9

Although nothing had been done to stock the site with food, water and so on, it was thought it could be pressed into service albeit with a reduced complement of two thousand staff. The conditions would be very basic and the site could not be relied on for continuous occupation. In fact, it had been proposed as early as November 1956 that the site even in its unfinished state would provide a better site for the seat of Government than the London Citadels.

In June 1959 the Cabinet discussed the progress of the site and the extent to which it could be used in the near future. Although the Prime Minister had authorised construction in 1955 it had never been discussed in Cabinet. The Cabinet were now told that the plans assumed that the main party of Ministers, officials and the Chiefs of Staff would occupy STOCKWELL (as SUBTERFUGE was now called) during the Precautionary Period before nuclear attack, but the Prime Minister with a small party of very senior Ministers, officials and service advisers might wish to stay in London as long as there was any hope of averting war.

This touches on one of the core problems with the CGWHQ. If it were manned its secrecy could be lost, but if manning was delayed the staff might never reach it. The idea was that it would be manned in two or three days near the start of the seven-day Precautionary Period which would precede the first attack and allow for preparations to be made. But in Exercise Felstead held to exercise top-level plans for "transition to war", the simulated Cabinet were not able to justify giving the order to man TURNSTILE until the seventh day of the Precautionary Period which was theoretically too late.



East Main Road. Photo Nick Catford

The Cabinet was told that the large numbers of officials needed to organise the national food supply could not be housed at STOCKWELL and that the Ministry of Agriculture Fisheries and Food (MAFF) had found an alternate site at Aberystwyth. This arose from discussions between MAFF officials and Padmore in 1956 when Padmore wrote to MAFF saying: "The Working Party recognise that the problems facing your department in war are of a special nature in that you will have to call into being a completely new nation-wide food control system under close central direction. We would not therefore wish to question further your plans for establishing a Food Department Headquarters at some place outside the Central Government Headquarters."

East Main Road. Photo Nick Catford

By 1958 the department had secured agreement that the university buildings in Aberystwyth code named ARARAT would be earmarked for it although the university authorities were not informed. In 1960 when the ammunition sub-depot at Monkton Farleigh became available there were discussions on its possible use as the MAFF war headquarters to accommodate up to 1,000 under the code name GULLY, but the idea was not pursued.

The Spring Quarry site had originally been requisitioned from its owners but in 1959 negotiations were opened to compulsorily purchase it. The owners did not object but the case had to go to the Lands Tribunal to settle the price. Needless to say the Ministry of Works gave only the minimum of information to the tribunal.

By May 1960 under an interim plan the site could have taken 3,000 and interim operational orders were drawn up and issued to Establishment Officers to be put into the Top Secret Annexe of Departmental War Books. These covered such things as drafting in communications and maintenance staff at the start of a Precautionary Period, sending one month's rations and stationery to what had been designated as Check Point, distributing furniture,

putting up internal signs and sending an advance party. By the end of 1960 the bulk of the furniture, stationery and canteen equipment had been delivered underground and food stocks were available. But by mid-1961 the communications were still only about ten percent complete.

The CGWHQ becomes operational

By August 1962 the construction work was complete. All the telephone circuits had been made together with half of the telegraph circuits. The massive amounts of emergency food, furniture and stationery were on site. This was not however distributed to the various rooms where it would ultimately be needed. Instead, like most of the communications equipment which would follow, it was stored in a few places ready to be installed on the day. This was to disguise the site's function and help to reinforce part of the cover story that the site was a government stores depot. The departments had drawn up lists of staff, manning instructions had been issued to Departmental Establishment Officers and a transport plan completed. To all intents and purposes the emergency Government War Headquarters was at last operational.

In mid-1963 the Cabinet Secretary reported to the Prime Minister (Harold Macmillan) that the site was ready. Capital costs had been some £2.5m. Annual maintenance costs were some £150,000 plus around £500,000 for rental of communications from the Post Office. (The Post Office, also known as the GPO, was a nationalised industry and effectively a government department until 1969.) The same report however expressed fundamental doubts about the entire concept of a protected single nucleus of central government, suggesting that it was possible if not probable that the Soviet Union knew of the site and its purpose.

The infrastructure of the CGWHQ site

The CGWHQ was developed in Spring Quarry, a name which predates it but still continues in use. The quarry is southwest of the small town of Corsham in Wiltshire between Chippenham and Bath. Spring Quarry was one of several sites in the area which had been used since the nineteenth century to mine an oolitic limestone known as Bath stone for building. This occurs in fissured beds varying between 5 and 10m thick overlain by approximately 12 metres of coarser-grained rock (known locally as Rag) with a variable thickness above of layers of sand clay and rock (called Forest Marble). Depending on the surface contours, the total thickness of the overburden is of the order of 24 metres.

Many of the mines or quarries in the Corsham area were taken over by the military before or during World War II, mainly to store ammunition. The northern part of Spring Quarry was converted at great expense into a factory producing mainly aircraft engines and employing several thousand people. Many of the stores continued to be used after the war and the factory site was taken over by the Admiralty for storage, although it was still designated as an emergency factory in the event of another war. Although called a quarry the site is completely underground and is accessed by several lifts and slope shafts.

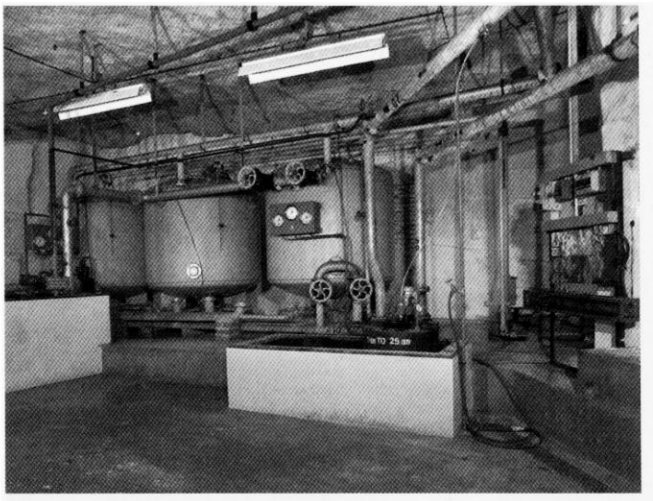
Entrance to Passenger Lift 1. Photo Nick Catford.

There are underground routes linking Spring Quarry with two other quarries on the north side known as Browns Quarry and Tunnel Quarry. It is bounded on the north side by Box railway tunnel although the track bed is some 75 feet above the level of the quarry workings. The southern part of the quarry continued to be used by the Admiralty for storage while the parts to the west and east were left largely undeveloped.

Spring Quarry had been used by thousands of workers during the World War II and was largely self-sufficient. Most of the original factory site was taken over and the protected area taken for the CGWHQ measures some 2,300 feet from east to west and 900 feet from north to south. The main area is some 140,000 square yards gross or 93,000 square yards net. The operational areas, which are all on one level, are around 90 feet below ground level.

The original quarrying operations had left randomly scattered pillars of rock varying in size and shape from 100 to 1,000 square feet supporting the roof which take up some 22 percent of the floor area. When the conversion work started some of these pillars were strengthened with concrete and in some areas the roof was reinforced with girders. The height of the accommodation areas varied from 12 to 20 feet. The original and often wide roadways were kept, although at some point they were renamed and the remaining areas partitioned off into rooms of varying sizes and shapes, signals areas, dormitories, kitchens, canteens, a hospital and a laundry.

The CGWHQ site would need surprisingly large quantities of water. This was distributed throughout the site from a pressurised 250mm-diameter main fed from the public supply which enters the complex at emergency exit B. If this was, as expected, disrupted during war, water could be taken from an underground culvert and treated before

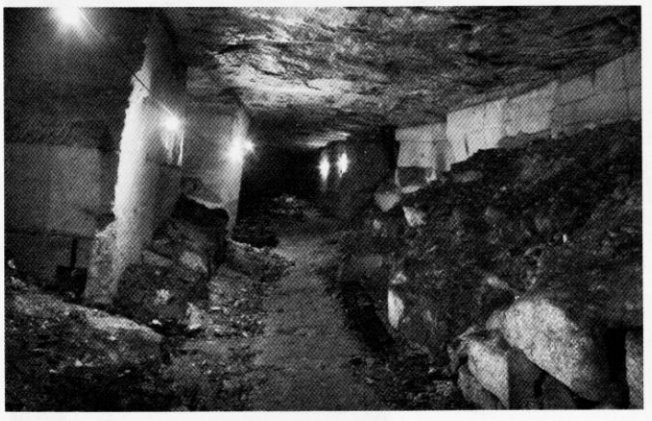


Water treatment plant Area 11. Photo Nick Catford

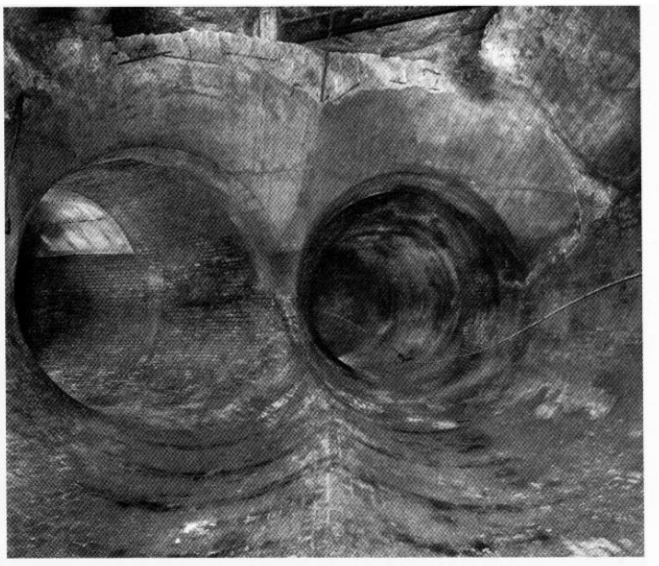
being stored in tanks capable of holding 440,000 litres. There was also a spring in the complex at the base of airshaft B3.

There was also a spring in the complex at the base of Air Shaft B3. Two further tanks held 1.85 million litres of water located in the east cold sink to provide cooling water for the air-conditioning plant and 1.25 million litres situated in Area 11 to provide cooling water to the diesel generators. Significant amounts of water percolate through the rock into the so-called lungs to the east and west of the operational area and this is drained by gravity to a pumping sump in the east lung. From here it is discharged via a culvert into a storm water drain in the adjacent Box railway tunnel.

To maintain environmental conditions a substantial amount of ventilation, refrigeration and electrical power generation equipment was required with some of it dating from the time of the wartime factory. When converted, the main protected area (sometimes referred to as 'The Keep' or the 'Citadel') was flanked by two areas known as the West Lung and the East Lung. These 'lungs' were used as air supply reservoirs for the personnel and equipment needs within the protected area and were served by several air supply shafts. The lungs have protected supply shafts terminating at ground level although a number of them have been capped over the years. The environmental conditions within the lungs are



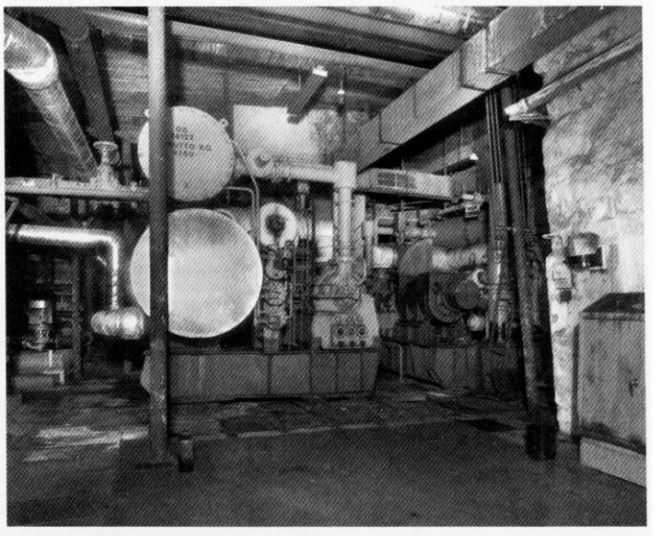
Inside West Lung



Air shafts. Photo Nick Catford.

fairly constant at around 12 degrees Centigrade and 95-100 percent relative humidity.

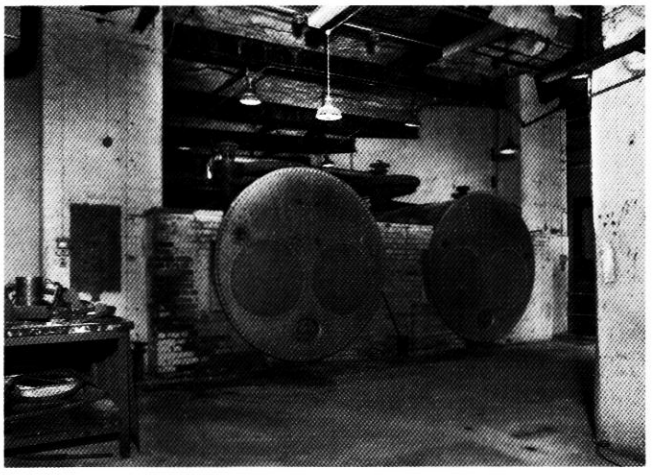
The main air supply comes from the west lung cold sink and passes through the west ventilation and air conditioning plant. Ventilation is provided by central plant which takes in 84,000 cubic feet per minute of fresh air, exhausts an equal quantity if all the fans are running and recirculates 428,000 cubic feet per minute.



Sulzer compressor evaporator condenser in Area 10. Photo Nick Catford.

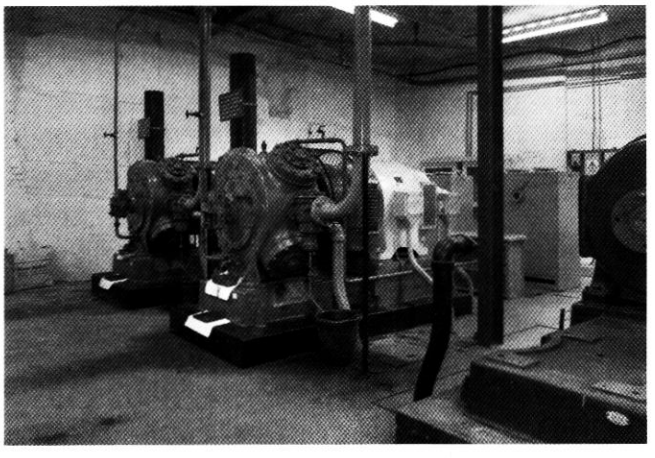
The air is conditioned by two Sulzer compressor evaporator condenser units which were installed in 1961, each rated at 250 tons of refrigeration capacity. The units operate in a heat pump mode, using waste heat from the condenser to heat the air. One is located in the east end and the other in the west end of the facility. The recirculated air is delivered to the 'lungs' via the North Drift and a comprehensive underfloor duct system. It traverses the areas, under the influence of the main fans before entering the roadways which act as the return ducts. Air filtration is by filters which remove dust and other particles from air and other gases by electrostatic means.

The facility was originally served for heating and cooking by an underground steam boiler house which by 1980 was no longer serviceable. However, heating was found to be unnecessary due to the waste heat being emitted by the refrigeration plant used for dehumidification.

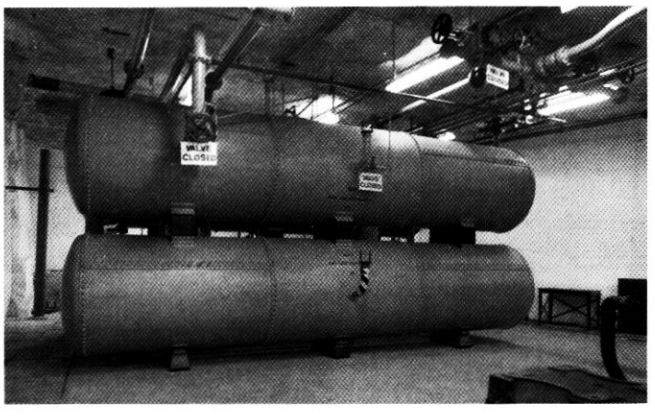


Part of the boiler house. Photo Nick Catford

The complex contained 31 ablution blocks for both male and female staff. The effluent drained by gravity to an ejector station in Area 11 and was pumped from there to the surface main drainage system. Likewise kitchen waste was pumped from a further ejector station to the surface mains system. Sewage was discharged via an 8-inch-diameter pipe to the public sewers in the surface plant yard. In an emergency it was possible to discharge effluent into Box tunnel under gravity.

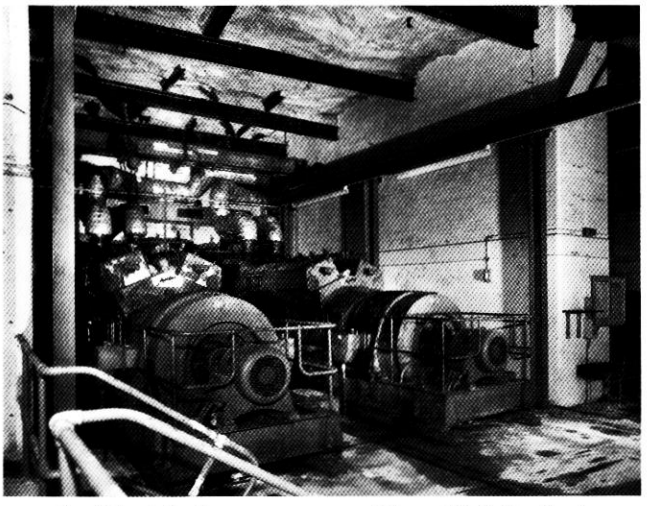


Compressor room Area 11. Photo Nick Catford



Compressed air tanks. Photo Nick Catford.

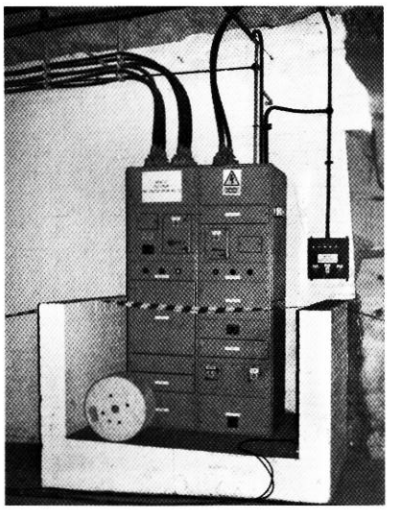
Standby power was generated at 11KV by four Mirrlees 12-cylinder V-type diesel generators (type JVSS12) which were built in 1960. When examined in 1981 the engines were found to be in good condition although a report said they had been found to be unreliable by other operators. The generators were fed with Grade A diesel fuel from twelve nearby tanks which could hold 176,400 gallons.



2 of the Mirrlees generators. Photo Nick Catford.

The power house showing the 2 generator bays. Photo Nick Catford.

Transformer sub-station to convert the 11KV from the distribution ring to 415v. Photo Nick Catford



The electrical distribution comprised an 11-KV ring main fed from the surface which originally supplied 34 500-KVA transformers giving a total transformer capacity of 17 MVA. The electrical equipment was refurbished in 1981 but by 1982 some of it was reaching the end of its design life.

The complex was liberally supplied with personnel accesses, lift accesses and escape routes both to adjacent underground workings and to the surface, although over the years some of these fell out of use. In 1981 access could be made by:

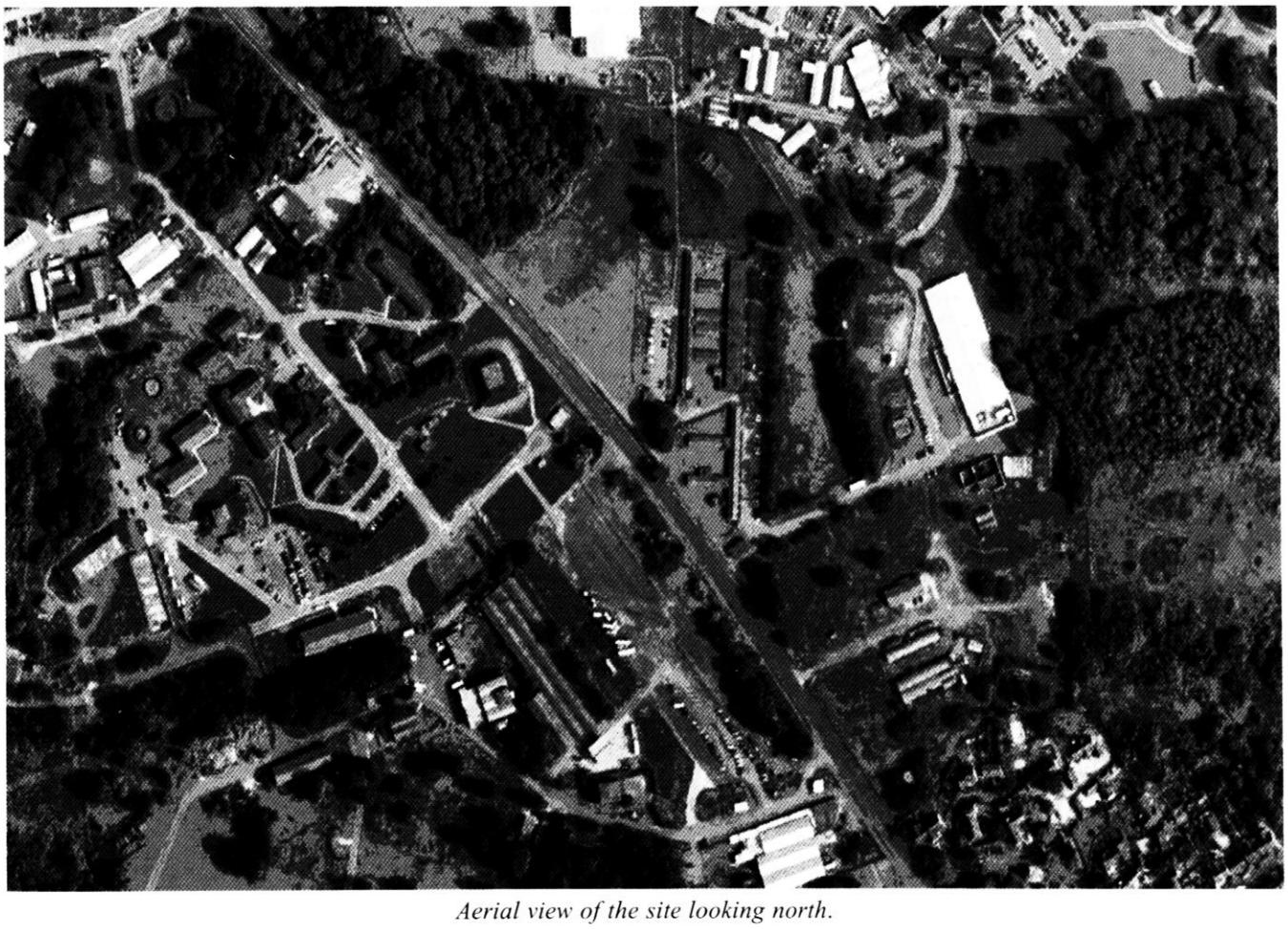
- seven airtight doors to adjacent areas available as emergency exits
- two passenger lifts (PL1, PL2 and PL3)
- one slow goods lift (GL1)
- two fixed staircases.

There was originally also a machine lift (ML1) – but by 1980 this was unused and the shaft capped – and an escalator (escalator A).

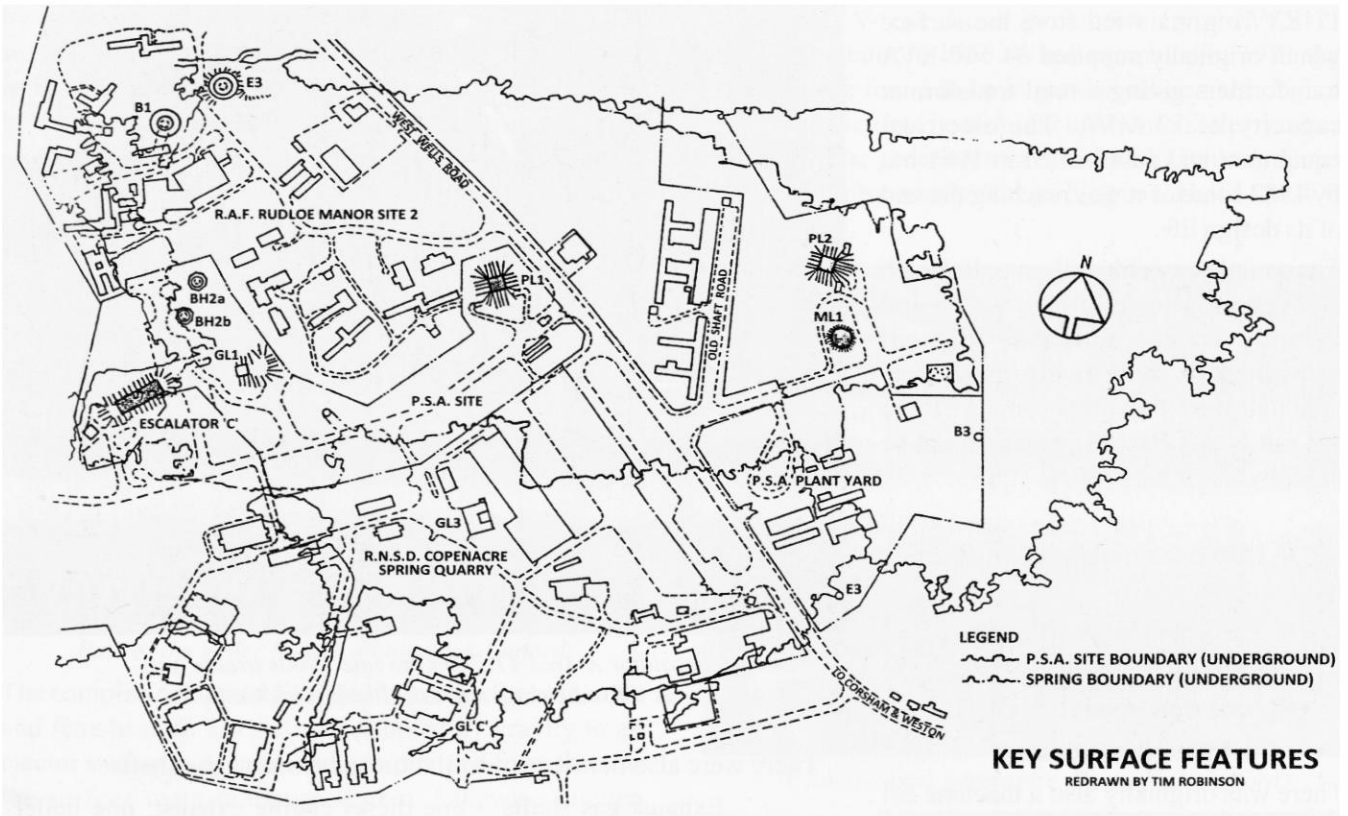
Escalator A Area 11.From the late 1960s usable only as a fixed emergency exit. Photo Nick Catford.

There were also numerous ventilation and exhaust gas shafts:

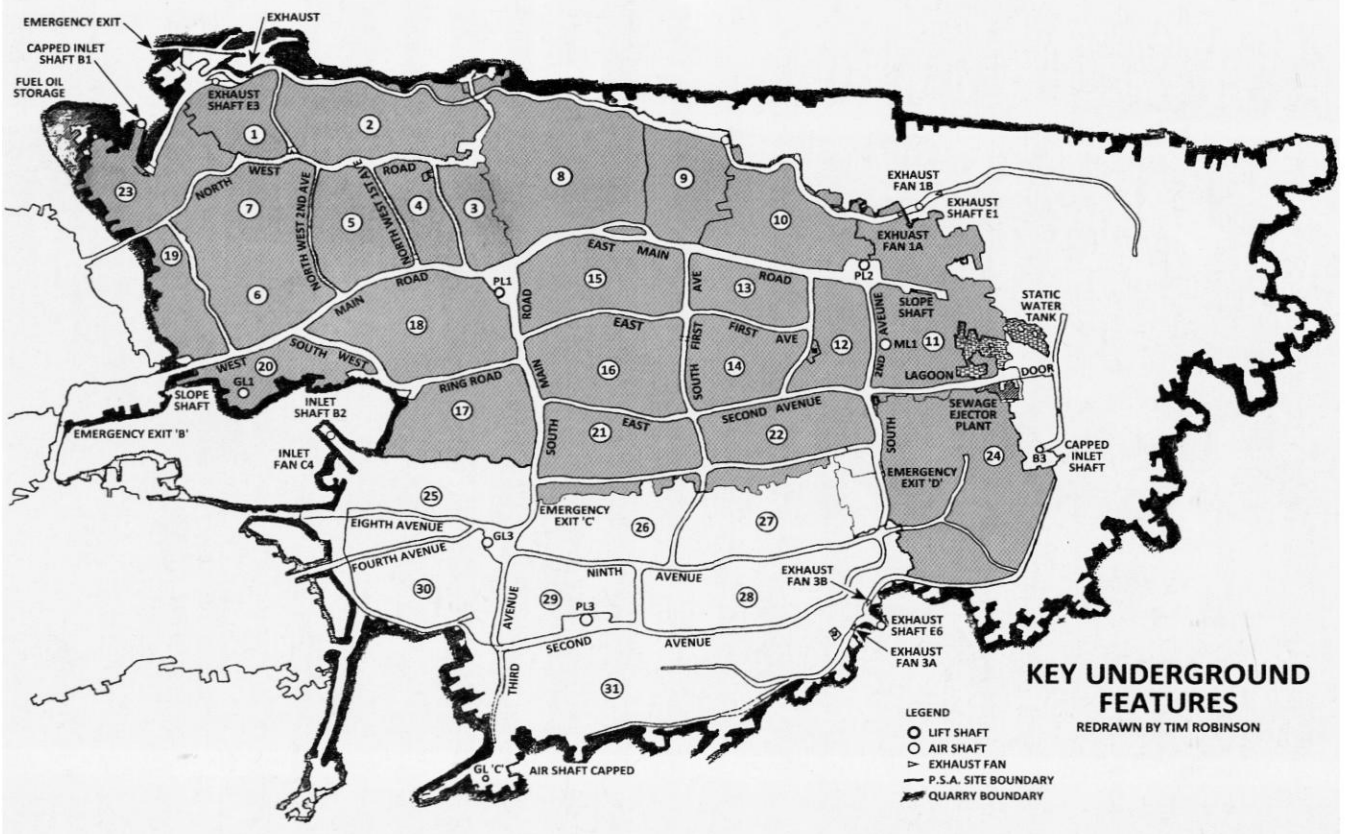
- Exhaust gas shafts – one diesel engine exhaust; one boiler-house flue (B2 & B2a)
- Ventilation shafts five (B1, E2, E1a, E1 and B3).



Aerial view of the site looking north.



Plan of the surface features of the site corresponding to the aerial photograph. Note the positions of PL1 and PL2 to locate the features on the photograph and also plans of the underground areas.



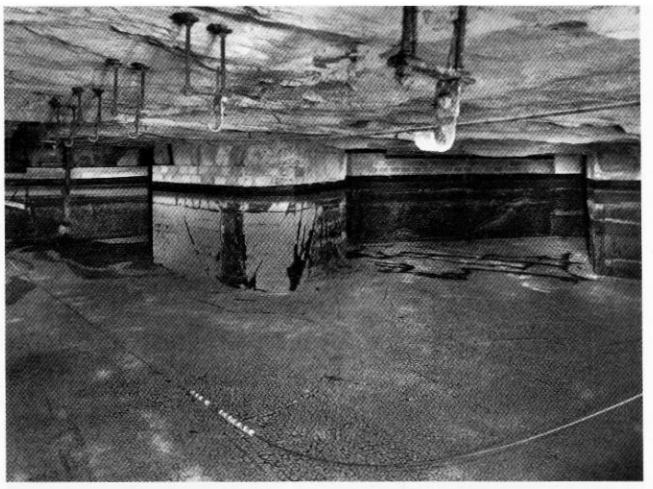
Outline plan of Spring Quarry showing in grey the areas used by the CGWHQ

The relocation site in detail

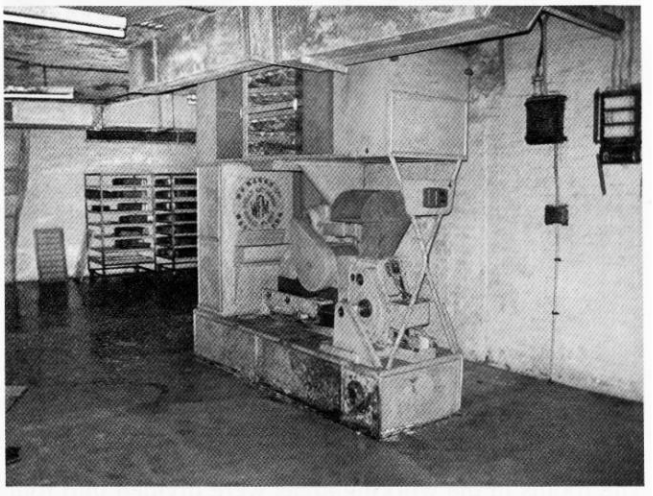
Internally, the CGWHQ was divided into 22 Areas by masonry walls and each area was served by a system of roadways and walkways.

The main uses for each area as developed in the late 1950s were:

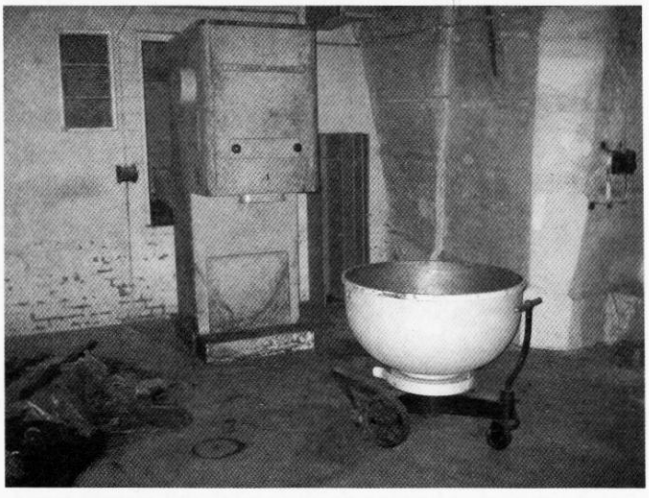
1 Plant – west ventilation and air-conditioning plant, main air intake
2 Board of Trade, HMSO, Office of the Minister for Science, Lord Chancellor's Department, Customs and Excise, Treasury, Inland Revenue. Dormitory
3 Furniture store, dormitory when manned; Post Office, stand-by diesel
4 Furniture store, dormitory when manned
5 Furniture store, dormitory when manned
6/7 Kitchen and bakery, canteen
8 Post Office, main GPO telephone exchange
9 Hospital and furniture store, on manning dormitory for 450
10 Ministry of Transport
11 Plant – east ventilation and air-conditioning plant, domestic water treatment plant and storage tanks to provide water for domestic use and fire-fighting in the event of mains failure, lagoon containing cooling water for power station and engineering equipment fed from the underground stream, sewage ejector station, electrical sub-station, PL2 (two lifts) not used in peacetime
12 Kitchen and dining area (the laundry was relocated to this Area)
13 Ministry of Power, Ministry of Agriculture
14 War Cabinet, Cabinet Secretariat, Chiefs of Staff Organisation, PM and senior Ministers (180 working spaces)
15 Camp Commandant, Establishment Officers, public address system Lamson exchange, dormitory for 700
16 BBC, Central Office of Information, Ministry of Health, Home Office, Ministry of Housing and Local Government, UK Land Forces (UKLF), Scottish Office (250 working spaces)
17 Ministry of Aviation, Ministry of Labour, UKLF
18 UKLF, Admiralty, War Office, Air Ministry
19 Workshops, boiler house, fire station, main power house and oil storage tanks
20 Laundry (possibly later food store for biscuits)
21 Communications centre, signals organisation divided into six groups
22 Colonial Office, Commonwealth Relations, Foreign Office
23 Fuel storage
24 Water treatment, water storage, sewage ejector.



The drained lagoon in Area 11. Photo Nick Catford.



Fully automated bread plant in the old bakery. ©M.A. Bennett/MOD/EH



Dough mixer in the old bakery. ©M.A. Bennett/MOD/EH

The accommodation space of the CGWHQ was divided into three categories:

1. The inner core of the headquarters was Area 14 with domestic and working accommodation for the Prime Minister, the War Cabinet, the Chiefs of Staff, their supporting staffs and their Map Rooms.

2. Nearby were the governmental departments which would have the most active roles to play:

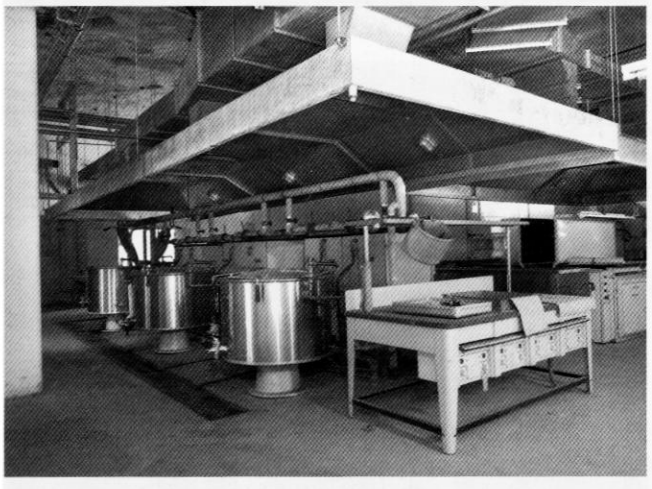
a.) service departments (Air Ministry, War Department, Admiralty, UKLF and Ministry of Supply)

b) 'due functioning' departments (MAFF, Ministries of Health, Local Government, GPO) together with the extensive communications areas

c) other departments (Transport, Trade, Labour, Works, etc)

d) 'cold storage' departments which did not have an immediate function in the survival period such as the Treasury, HMSO and Lord Chancellor's Dept).

3. General purpose space (Camp Commandant, dormitories, canteens, hospital, etc).



Kitchen, Area 12. Photo Nick Catford

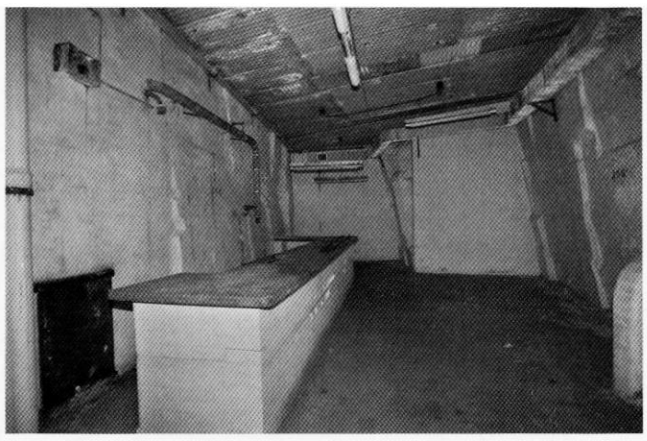
The rooms in the working areas were divided into four basic types and the official lists of furniture for each type hint at the spartan conditions the occupiers would meet when they went underground.

Type A rooms

These would serve as combined working and sleeping quarters for the more senior staff who needed to work on a 24-hour basis. The furniture for one person consisted of:

- 'Bedstead, emergency metal folding' 1
- 'Mattress, hair and fibre' 1
- Blankets 2
- Sheets 2
- 'Pillows, millpuff' 2
- Pillow slip 2
- Bedspread 1
- Wardrobe 1
- 'Table, emergency folding wood' 1
- 'Chair, tubular arm metal nesting' 1
- 'Chairs, wooden fold flat' 2
- 'Mats, coir coloured 4' x 2'3"' 1
- 'Filing cabinet, steel 2 drawer' 1

Each room would also have an ashtray and a wastepaper bin.



Servery, Area 7. ©M.A. Bennett/MOD/EH

Type B rooms

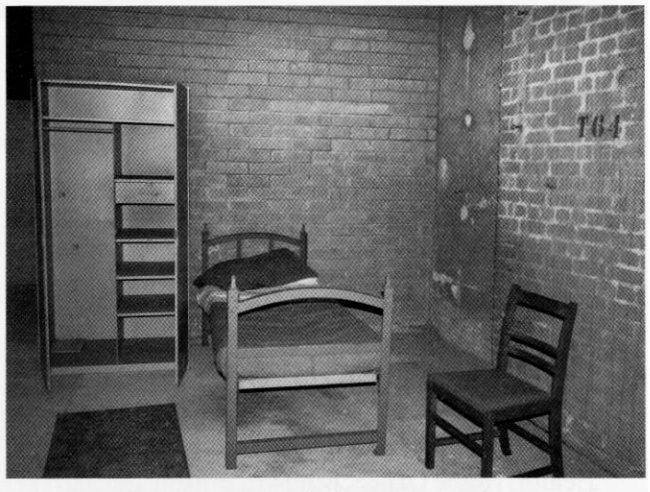
These would serve as working space only. Each individual occupant would have a 'table, emergency fold wood' and a 'chair, tubular arm metal'. The room would also have a wastepaper bin and an ashtray.

Type C rooms

These would be map rooms and conference rooms of various sizes; furniture provision would depend on the potential use.

Type D rooms

These would serve as dormitories for varying numbers. Furniture and bedding would be similar to the Type A rooms but without the table, metal chair and filing cabinet.



Furniture laid out recently by the maintenance staff to show how a bedroom might look. Photo Nick Catford.

There were also a few 'VIP' rooms for Ministers and the most senior officials with the Prime Minister being allocated VIP1. This designation may however not have referred to the quality of the accommodation but to the type of telephone connection installed in the room.

In the working areas there was extensive partitioning resulting in many often quite small rooms, but in the areas used for dormitories and canteens the areas were much more open. Overall, there were 584 working rooms. In most of the rooms the dividing walls did not extend to the roof but were left with a ceiling gap of around two feet which was finished with mesh to allow for air circulation.

Part of Area 9, the main stores holding area.
©M.A. Bennett/MOD/EH

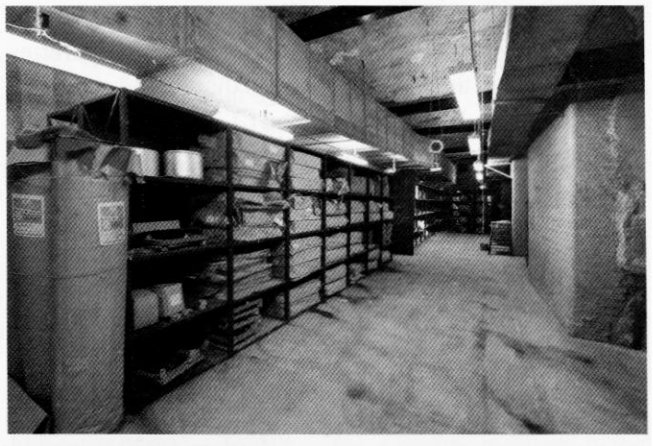
By the middle of 1961 the massive amounts of office and other furniture, stationery and canteen equipment had been delivered and stored underground. The list of materials stored on site indicates how large an operation it was. It included:

- 250 bedsteads
- 1,925 two-tier bunks
- 4,600 mattresses
- 15,340 sheets
- 4,600 pillows
- 6,500 pillow cases
- 310 bedspreads
- 5,125 towels
- 225 canteen tables
- 2,320 dinner plates
- 2,320 cups, breakfast
- 2,320 cups, tea
- 1,152 tumbler half-pint
- 2,320 fork, dessert
- 1,160 fork, table
- 1,160 fork, fish
- 2,320 spoon, dessert
- 11 trolley, tea
- 1,500 basin, pudding 3"
- 4 cleaver, butcher
- 9 dust pan
- 16 spoon, kitchen 12"
- 12 sieve, chip potato
- 342 cloth, tea
- 28 gallons liquid detergent
- 24 brush, nail bristle
- 4 weighing machines
- 4,260 lockers
- 2,320 table, folding 4'6" x 2'3"
- 2,120 tray, filing fibreboard
- 2,000 bin, wastepaper
- 250 cabinet, filing 2-drawer
- 100 cabinet, filing 4-drawer
- 9,086 chair, fold flat
- 547 chair, tubular small
- 300 chair, open arm nesting
- 106 mirrors
- 3,290 rug, rubberised back
- 1,994 ashtray 4" circular glass

The CGWHQ was in essence an underground office and communications complex with domestic hotel facilities. Huge amounts of basic office supplies were stored on site, often in heavy-duty cases which would enable them to last indefinitely. The original list of items held included:

- 11,300,000 sheets of duplicating paper
- 100,000 plain gummed labels
- 12,000 toilet rolls
- 750 shorthand notebooks
- 700 pencils, lead, ordinary, HB
- 25 boxes of white chalk (each with 144 sticks)
- 1,000 erasers, pencil
- 10,000 ballpoint pens, refillable, black
- 100,000 rubber bands

There were also four hundred typewriters.



Some of the huge range of stores still held at the site.
©M.A. Bennett/MOD/EH

Apart from a few items which needed to be turned over annually, the majority of these supplies would be untouched and unconsidered for the next fifteen years until it was decided that the amounts held could be reduced.

As well as the above items, HM Stationery Office also arranged for copies of some reference books to be held at the site at the request of the various departments; many of these were updated annually. The list asked for by the BBC is both odd and interesting, consisting as it did of:

Cassell's Encyclopaedia of Literature
Guide to the House of Commons
Holy Bible
Kessing Contemporary Archives
Modern English Usage (Fowler)
Oxford Dictionary – Shorter
Roget's Thesaurus
Russian-English Technical and Chemical Dictionary
Statesman's Year Book
Times Atlas
Titles and Terms of Address
USSR Atlas
Who's Who (International)

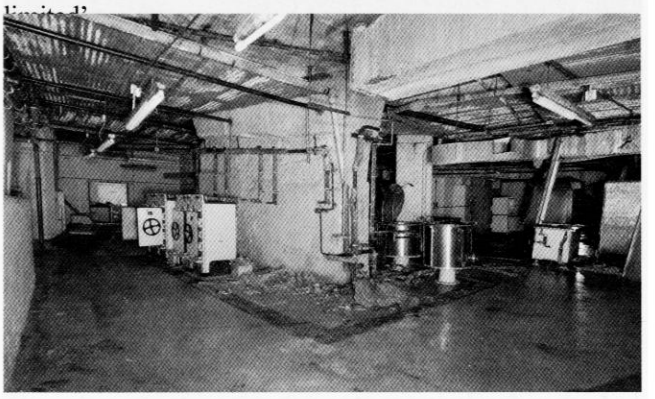
Looking after the staff

To feed the planned four thousand staff, two fully equipped industrial-scale kitchens and a bakery were installed under the direction of the Army Catering Corps. It was hoped that a supply of fresh food would be laid in as part of the manning operation and then replaced as necessary. But in the probable event that fresh food could not be obtained, standard army ration packs would be used and 120,000 rations in 6,000 boxes were held. These were stored in huts on the surface to allow half of them to be changed every year without compromising the security of the underground site (this change-over needed sixteen 10-ton lorries). 1,500 tins of biscuits were also held. These had an indefinite life although they were turned over every six years.

The NAAFI would also supply an initial stock of canteen items such as toilet requisites, chocolate and cigarettes although given the inevitable chaos that would surround the manning and operations of the CGWHQ, it is hard to imagine that such pre-war niceties would have been seen on the day.

Food preparation area, Area 12. Photo Nick Catford.

To cater for non-physical needs there would be a welfare officer and the army would provide two padres – one Church of England and one Roman Catholic. Among the pre-stocked items were an altar cover, an altar cross, one hundred Army Prayer Books and one hundred Roman Catholic Prayer Books. There were also three designated recreation areas although 'facilities for recreation are



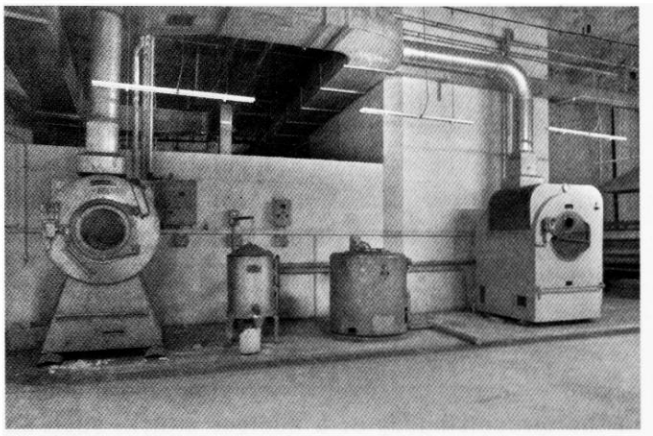
Steam and electric ovens in Area 6.
©M.A. Bennett/MOD/EH

The site would need its own medical facilities although the extent of these was the cause of much debate. The original plans included a fully functioning hospital with an operating theatre, dental surgery and forty single-bed wards. The cost of this, requiring as it did its own independent ventilation system, was prohibitive and the requirement was reduced to only six small wards with consultation and treatment rooms, dispensary, dental surgery, X-ray room, small kitchen office and store. The aim was simply to keep the staff fit for work. Once the site was operational, if staff were seriously ill they would be sent elsewhere for treatment.

One of the wards fitted with furniture recently by the maintenance staff. Photo Nick Catford.

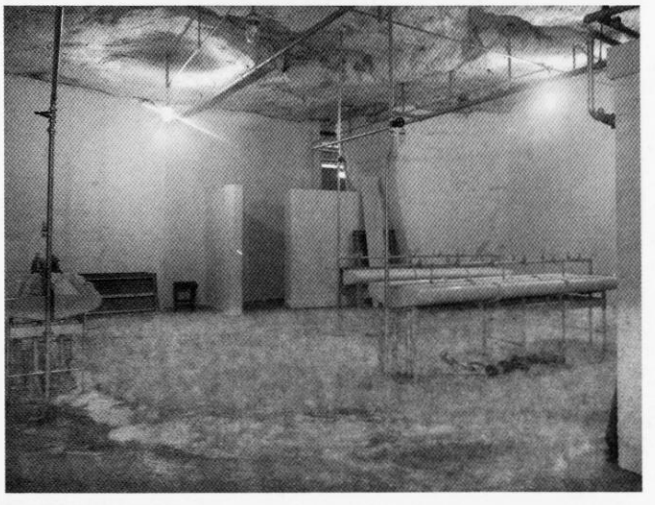
There was an industrial-scale laundry originally in Area 20 but later relocated to Area 12 when the accommodation was reduced in the late 1960s. This was only for "housekeeping washing" mainly bedding. The staff would be expected to wash their own clothes by hand in sinks provided.

Staff were told that their food and accommodation would be provided free, but some accounting would be needed for local purchases, canteen items purchased by staff,

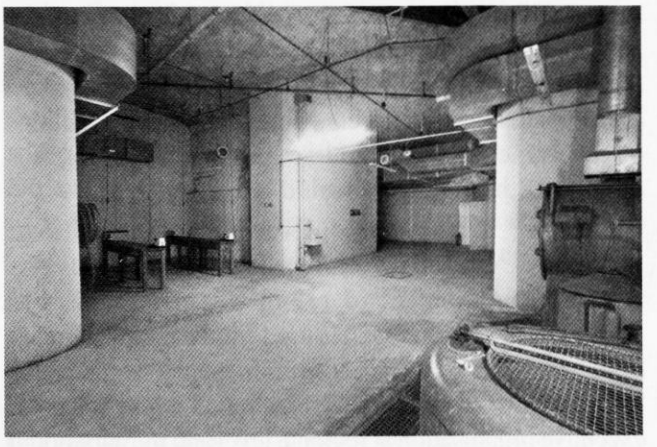


The relocated laundry in Area 12 featuring washing machine, boiler, spin drier and hot drier. Photo Nick Catford

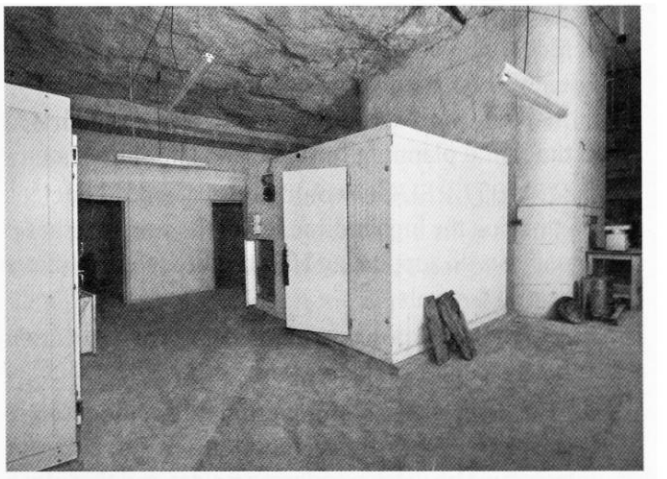
and pay to the staff (this would be of a standard sum per person as anything else would be too complicated). This would be funded by drawing a cheque on the occupying department to be cashed locally. Although the cost of the CGWHQ was a constant problem internal accounting would not be. The headquarters would have no spending functions as such and anything it needed would be paid for by the appropriate department.



Sinks for hand-washing of clothes. Photo Nick Catford



Ironing station, Area 12. ©M.A. Bennett/MOD/EH



Walk-in fridge, Area 12. ©M.A. Bennett/MOD/EH

The role of the Central Government War Headquarters

It has always been seen as axiomatic, at least by the civil servants involved, that government as near to the existing system as possible should continue during and after a war. This also meant civil government.

The Home Defence Review of 1960 echoed this approach when in discussing the purposes of home defence it said: "There is one type of home defence measure which must be maintained whatever view is taken of other measures – namely some provision for carrying on the government of the country (including the provision of emergency headquarters for Central Government and a regional organisation, together with their essential communications). The Committee consider that any Government must fulfil the duty of providing, so far as it can, for the maintenance of a framework of administration under all circumstances". The CGWHQ, and its predecessors in World War II, were set up to provide this "machinery of Government in war".

When it was first conceived in 1953, the 'Central Government nucleus' site was planned to be a reserve for Whitehall in case that key area of Central Government activity were destroyed. From the site, a nucleus of the main decision-makers would steer Britain through a possibly lengthy World War III. They would be supported by their advisers and representatives of all the government departments and nationalised industries which would have a role in directing and supporting the military effort and directing the home front.

This concept had really changed little from the days of World War II when the nucleus operated from the Cabinet War Rooms and the War Rooms of the various fighting services and the "due functioning" departments. With the change in strategy brought about by the Strath Report, SUBTERFUGE would take over from Whitehall at the start of, if not actually before, the outbreak of hostilities but its planned role would not be to direct a lengthy war but to direct the immediate and urgent struggle for survival after Britain had been destroyed as a political and economic entity by Soviet H-bombs.

The structure designed to govern and administer a shattered Britain would be very different and markedly less democratic than its peacetime predecessor. The basic plan for wartime government was summarised when the initial planning for the CGWHQ started as:

1. "SUBTERFUGE would house a central nucleus controlling the higher direction of the war, together if possible with supporting HQs required to administer essential controls.
2. There should be a maximum degree of devolution from the centre to the regions.
3. The central organ of government should attempt to discharge only those functions of government which must be discharged in one place and that place would be the seat of supreme control; and only such of those functions as directly affect the nation's capacity to survive thermo-nuclear attack.
4. On the threat of war Regional Commissioners would be appointed and established with their civil and military advisers in operational HQs away from target areas.
5. After attack the traditional system of government of Ministerial and departmental responsibilities will, at both central and regional headquarters, give way to a system whereby each HQ will operate as a single entity, i.e. as a command post. This system of government would come into full operation when the seat of central government moved to the emergency HQ or nuclear attack had occurred."

In 1961 Sir Norman Brooke, the Cabinet Secretary, wrote a private paper on cabinet government. In it he described government in war as being based on "...a very small nucleus at the centre concerned in the main not with matters of internal domestic concern but rather with those outward-looking activities of government which must be carried out if we are to remain in control of our affairs – contacts with others and liaison between civil and military power – and the maintenance for as long as possible of the supremacy of the civil power." He then added, "We plan to maintain central direction of that sort, even in the most rudimentary form, for as long as possible in the intensive period of nuclear attack and – and this is the point I want to stress – the capacity to re-assert civil control and, as soon as possible, central political control, for the period of recovery after the initial nuclear phase."

This would be a completely different method of governing from the peacetime one and emergency legislation would be needed to legitimise it. Throughout the Cold War various Emergency Powers (Defence) Bills and supporting Regulations were drafted ready to be rushed through Parliament to give the War Cabinet at the CGWHQ and the Regional Commissioners almost unlimited powers.

As an example, the "Defence (Machinery of Government) (No 2) Regulations" were drafted in 1963 so that in war "any three or more authorised Ministers acting together shall have the power, so far as it appears to them necessary to:

a) Exercise any power vested in Her Majesty (including the power to appoint Ministers) ...
b) To give directions to any Regional Commissioner...
c) ...
d) To make ordinance laws..."

As a briefing note introducing the draft said, "This would, of course, amount to a totalitarian regime; and although, in the circumstances of a nuclear attack, such an arrangement would be inevitable there are obvious objections to it becoming known that the Government contemplate so absolute a departure from normal constitutional procedures..." The proposed emergency legislation was therefore never made public.

A tea trolley, vital for civil servants whatever the circumstances. Photo Steve Fox.

A early report from 1956 said that the first requirement would be "a machine of government to take the country through the attack and survival periods, i.e. until central government can be organised on a larger scale. SUBTERFUGE is concerned only with the national struggle for survival, control of military and civil defence authorities, supervision of the central control of essential supplies, shipping and communications, and communications with the civil population. Most functions of government which could not be done by the nucleus or regional headquarters would cease."

Following further consideration of the role of SUBTERFUGE and the joint civil-military headquarters in 1957, the concept of regional government was expanded. SUBTERFUGE fitted into the new concept of decentralised or regional government that would create "a machine of government, which relied on the effective executive organisation at regional level and the paramount consideration is to be a truly regional system of

government operating under effective control by Regional Commissioners".

It would be a "nucleus of central government to whose directions Regional Commissioners would be subject and which itself would discharge those functions of government which must be discharged in one place and that place the seat of supreme control." The Regional Commissioners would be in charge of running their regions on a day-to-day basis and apart from some matters "specifically reserved for the centre," such as control of strategic stocks of food and fuel, would only refer to the CGWHQ on matters affecting other regions or of national importance.

Exercise Cloud Dragon, held in 1959, considered the functions to be carried out at the CGWHQ and found that generally the working principles were valid, and that day-to-day control of matters such as life-saving activities and law and order could only be dealt with at regional level. In the attack period the central authority would be limited in the operational field to coordinating the regions. All operational matters would be left to the Regional Commissioner although his staff should be able to consult experts at the CGWHQ.

The Central Government would however need considerable amounts of factual information about the post-attack situation such as casualties, damage, loss of water supplies, and so on, to enable them to plan for the conduct of the war and national survival. Plans were made for the various regional Government controls to send regular situation reports to the CGWHQ.

A lengthy and quite critical report made in 1963 by the Ministry of Defence on the Machinery of Government in War, by which time the CGWHQ had been renamed TURNSTILE, said: "Plans for the maintenance of government in war are based on the assumption that in the face of nuclear attack there would have to be a departure from the traditional system of individual ministerial responsibility and departmental control to a system of regional government by Regional Commissioners."

It went on to say that the essential features of this system are "...firstly, the establishment in a wartime headquarters of a nucleus of central government to whose directions Regional Commissioners would be subject and which would itself discharge 'those functions of government which must be discharged in one place and that place the seat of supreme control'; secondly, the appointment of a senior minister in each region as Regional Commissioner who would have full powers of the Crown and Government in his Region subject only to his acting in accordance with any instructions or directions which might be given to him by central government.

"Following attack therefore central government could not rely on being able to do more than give broad policy directions to Regional Commissioners who, for the immediate aftermath at least, would have to rely largely on the resources of their own Region with little or no help or direction from the centre. Therefore, the extension of central government control would be a gradual and uneven process."

The directions given to departments to plan what they would do at the relocation site, and in particular what staff they would need to do it, were not precise and the Planning Team largely left the departments to work out their own plans. In 1958 the communications planners calculated that manning the communications that the departments were asking for would need 1,600 people against a planned maximum number of 1,040.

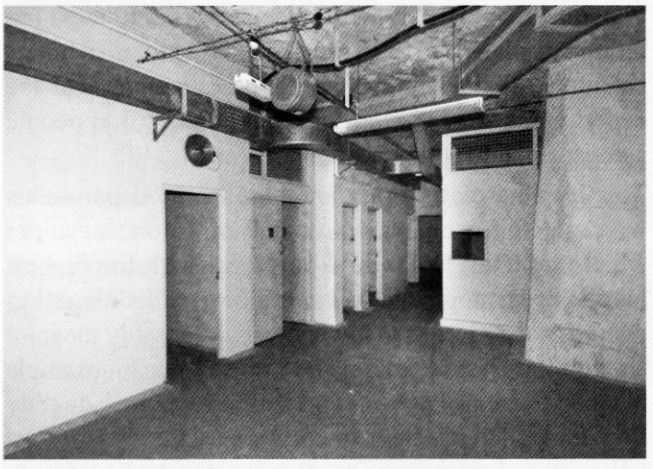
This led to a realisation that some of the departments were not following the command-post concept under which the CGWHQ would only deal with the highest levels of strategic decision-making and delegating operational activities to lower controls, notably the joint civil/military headquarters. The Home Office for example planned to control prisons and children's homes directly from the CGWHQ. New directives were therefore issued telling the departments to plan on the basis of only carrying out at the nucleus those functions which could not be carried out elsewhere, and where decisions could only be made at the highest level. Functions should be restricted to broad policy: e.g. relations with overseas governments, supreme military control and central control of strategic stocks of food and fuel.

Domestic facilities in Area 14. Photo Steve Fox.

The military seemed to have been slow to adapt to the idea that they would have to relinquish a lot of control to local commanders and also to the fact that post nuclear attack their main role would be to assist the civilian authorities in the survival period, particularly with the maintenance of law and order. The military had a particular problem in that during much of the late 1950s and early 1960s they expected to fight World War III from the CGWHQ. This meant they would need it to be a fully active headquarters not just in the destructive phase and beyond, but in the Precautionary Period which would precede the arrival of the H-bombs and which would involve mobilisation and perhaps some conventional fighting.

In 1961, a study was made as to what extent STOCKWELL could take over central government

functions in a precautionary period. It was suggested that most of the important tasks could be carried out from Whitehall but with STOCKWELL, once manned, taking some of the massive load of preparing the country for war. But manning STOCKWELL and the RSGs would denude Whitehall of many of its Ministers, senior service and civilian personnel at the very time when they would be needed most.



Hospital, Area 9.Note the quality of the finish here.

A change of role

This idea was not pursued but other practical problems were worrying the senior planners and matters came to a head later in July 1961. Cabinet Secretary Sir Norman Brook told Prime Minister Macmillan that up to then it had been planned that the Prime Minister would make the decision in a period of tension whether or not to move with the nucleus to STOCKWELL, and the facilities were being installed to authorise nuclear retaliation from there. But the planners increasingly realised that in the period of tension the Government's main task would not be to prepare for war but to avoid it and at the same time keep Parliament and the public informed. STOCKWELL would take up to two weeks to become fully operational and any move there would reduce the Government's ability to communicate with allies and others at exactly the wrong moment.

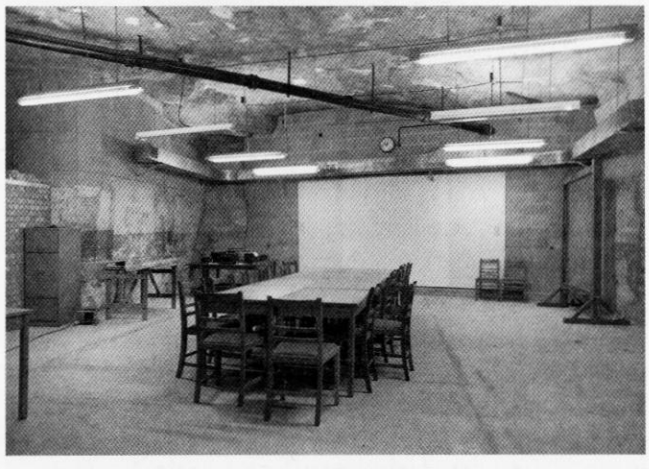
Whilst some Ministers could move to STOCKWELL in the precautionary period under cover of the less-secret movement to the regional headquarters, it would be extremely difficult for the Prime Minister to move before the outbreak of hostilities unless he considered that nothing more could be done to avert war. Norman Brook thought that if the Prime Minister stayed in London there would be no point in seeking to provide for some protected accommodation as it would not remove the problem of dislocation and would not survive an attack.

He therefore suggested that the central nucleus of government, except some ministers sent to the regions and STOCKWELL, should stay in London. Around this time, STOCKWELL was renamed BURLINGTON.

The Prime Minister agreed and directed that "planning should proceed on the basis that central government will remain in London throughout the Precautionary Period, that the machinery of government will function broadly as it does in peace and that the Prime Minister and his colleagues (with the exception of any who may be sent to Regional Headquarters and to BURLINGTON in order to man the governmental organisation for the survival period) will work at their normal places. Planning of BURLINGTON will continue on the assumption that its functions are:

1. Acting as the seat of government in the period of survival and reconstruction.
2. To be the alternate centre to London for authorising nuclear retaliation."

This change in emphasis meant that while BURLINGTON would still be manned in the Precautionary Period it would have no initial role and central Government would continue from London as usual. This caused problems for the civil and service departments as it meant that they would have to staff their peacetime offices at a time when they would be fully stretched and at the same time provide staff for BURLINGTON and the new Regional Seats of Government.



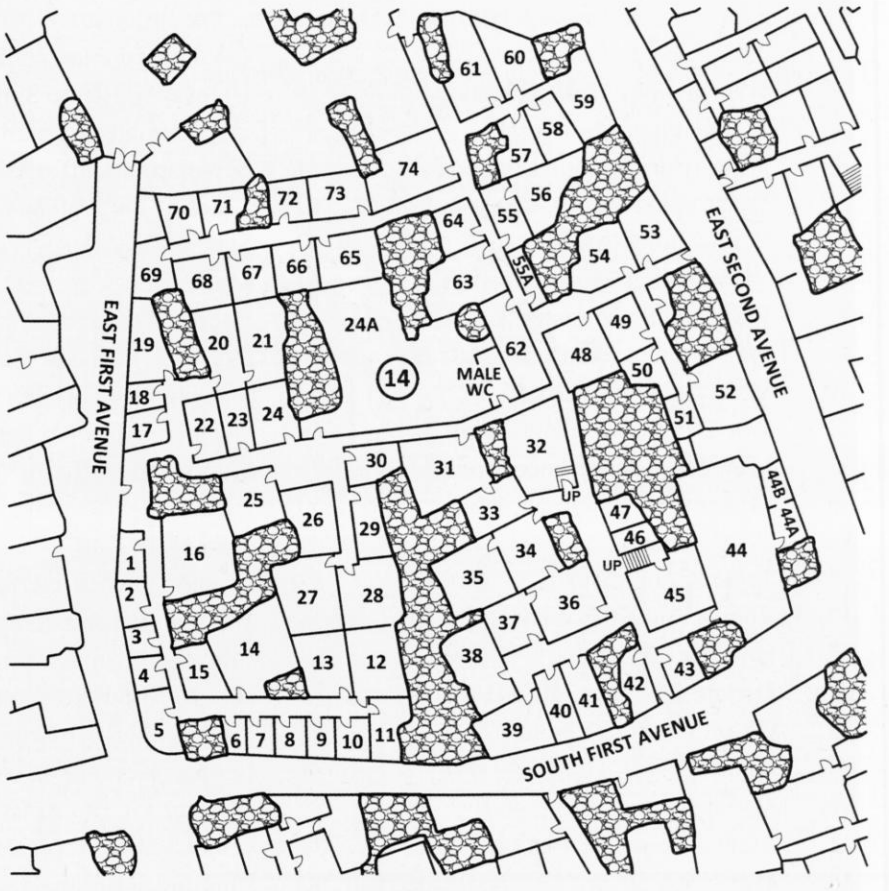
Conference room with furniture put out by the maintenance staff. Photo Nick Catford.

Sir Norman Brook's report said simply that the Prime Minister should "remain in London" where he would be at the centre of the Whitehall communications network in contact with UK and NATO headquarters, the Foreign Office and civil departments. There was a notable absence in his advice about what would happen to the Prime Minister after an attack had started and had been detected and judged to be a nuclear attack with London as a target. In theory, RAF helicopters would be placed at readiness at RAF Northolt on the outskirts of London ready to dash in to collect the Prime Minister and his immediate team probably from Horse Guards Parade and fly them to Corsham. However, it seems implicit in the new strategy that he and those who stayed behind with him would probably not have time to escape.

Up to this point nuclear release would have been authorised by the Prime Minister either at Downing Street or the CGWHQ but there was the increasing likelihood

that an attack on the UK would be delivered by missile with the warning time measured in minutes, perhaps just the famous four minutes. Not only would there be less chance of the Prime Minister escaping from London but it was possible that London could be taken out before the order to release the UK nuclear forces could be given, and so "nuclear deputies" were introduced. These were two senior Ministers chosen personally by the Prime Minister who would be available to give the order if the Prime Minister for whatever reason was not able to do so.

One of these deputies would go to the CGWHQ in the Precautionary Period where a small six-member nuclear retaliation cell would be established, while the other would go directly to the headquarters of Bomber Command. From 1969 with the advent of the Polaris force he would have gone to the naval headquarters at Northwood. However, it appears that by April 1964 the CGWHQ would not be used for retaliation as there was no longer a requirement for a deputy to go there.



AREA 14

Drawn by Tim Robinson

The internal organisation of the CGWHQ

From the outset the intention was that once it was fully operational the staff of the CGWHQ would work as what was termed a 'command post' operating as a single unit rather than a collection of independent departments all reporting to their own ministers and permanent secretaries, as was the case in normal peacetime government. However, whilst the CGWHQ was actually being built, little real thought was given to how it would actually work on a day-to-day basis. In mid-1961 along with the general increase in the pace of planning further thought was given to the practical aspects of the way the headquarters would work at the highest level.

The ideas were recognised as tentative as the CGWHQ would be operating in a very different world with a fundamentally different structure than the civil servants had grown up with, and from an untested site. Things might be changed at the time but the general policy was:

1. It was assumed that the War Cabinet would consist of the Prime Minister and five other Ministers acting as "the ultimate source of authority" with the Chiefs of Staff and others in attendance as necessary. The War Cabinet Organisation would include the Secretary of the War Cabinet and the Chiefs of Defence Staff, and would provide a combined military/civil secretariat supporting the War Cabinet and the Chiefs of Staff. The Prime Minister would probably take over the duties of Minister of Defence. The Home Secretary and the Foreign Secretary would probably also be in the War Cabinet but the Prime Minister might appoint other members on the basis of seniority and experience rather than their (former!) departmental roles. This structure meant that, operationally, below the War Cabinet the work would be divided in broadly two areas. The overseas sections would consider foreign affairs and anything to do with the war whilst the home defence sections would concentrate on the domestic situation.
2. Beneath the War Cabinet the Chiefs of Staff Committee would function in more or less its normal way in dealing with purely military matters.
3. The home defence bloc would be under the immediate supervision of the Home Defence (Official) Committee, with its own secretariat. This committee would have day-to-day executive functions in the battle for survival, and would probably work on much the same lines as the peacetime Official Committee on Emergencies. Its terms of reference would be:

Room allocations in Area 14 (B=office, D=bedroom, A=combined)

1	Telephone delivery room	38	Civil Secretariat, staff officers B
2	War Cabinet Minister's staff	39	Chief of Defence Staff personal staff B
3	War Cabinet Minister A	40	Deputy Chief of Staff A
4	War Cabinet Minister's staff B	41	Secretariat, staff officers
5	War Cabinet Minister A	42	Chief of the Defence Staff A
6	War Cabinet Minister A	43	Staff officer B
7	War Cabinet Minister's staff B	44	Map room
8	War Cabinet Minister A	45	Cabinet Office conference room & waiting room
9	War Cabinet Minister's staff B	46	Deputy/Under Sec Cabinet Secretariat (civil) A
10	War Cabinet Minister A	47	Secretary/Deputy Secretary Cabinet Secretariat (Mil) A
11	War Cabinet Minister's staff	48	Cabinet Office Conference Room & waiting room
12	Ministerial conference room	49	Map room staff
13	Ministerial conference room	50	Officer in charge map room
14	Typing section	51	Map room staff
15	Typing pool of 10	52	Draughtsmen & clerical staff map room
16	Registry and distribution staff	53	War Cabinet signal registry
17	Director, LCSA	54	Joint Intelligence Committee director's bedroom D
18	Deputy Director, BJCEB A	55	MI5 & MI6 representatives
19	Co-ordinator C-E policy A	56	Joint Intelligence Committee
20	BJCEB	57	JIB representatives
21	MI6 communications staff	58	Director GCHQ & GCHQ
22	MoD Director of Forward Plans	59	Senior service representatives
23	Minister A	60	Planning staff
24	MoD support staff	61	Intelligence staff
25	BJCEB support staff	62	Private secretary's bedroom
26	MoD Chief Scientific Officer	63	War Cabinet secretariat staff
27	Chiefs of Staff conference room	64	JIC sleeping accommodation
28	War Cabinet secretariat conf room	65	MoD sleeping accommodation
29	Under Secretary, MoD A	66	Minister A
30	Deputy Secretary MOD A	67	Minister A
31	Clerical staff B	68	Minister A
32	Clerical staff, Chief of Staff Org.	69	Minister A
33	Private secretaries	70	Joint Planning Staff Assistant Sec
34	Prime Minister's office	71	Joint Planning Staff clerical
35	Prime Minister's bedroom	72	CIA liaison
36	Cabinet Secretary A	73	Foreign office monitors
37	Private Sec to Cabinet Secretary	74	GCHQ communicators

LCSA = London Communications Security Agency

BJCEB = British Joint Communications Electronics Board

a. to coordinate the work of the civil and military organs of government and of the state corporations, private industry, etc on the home front

b. to give decisions on such work in accordance with delegated authority or within the framework of official policy

c. to submit other questions for decision by the War Cabinet.

The military elements supporting the War Cabinet were the Joint Intelligence Committee and its staffs, the staff of the Chief of the Defence Staff and a Map Room staff. The Map Room would collect and analyse all the available information about the situation of the country to support the decision-making committees. It would be the core of the Cabinet War Room within the nucleus of central government and the more important decisions would come from it. In total the War Cabinet organisation consisted (in 1961) of 210 people of whom about a third were clerks and typists. The main Map Rooms were built so that they could be overlooked from an adjoining conference or meeting room through large windows.

Some of the huge range of stores still held at the site. Photo Nick Catford.

Abandoned kitchen and bakery in Area 7. Photo Nick Catford.

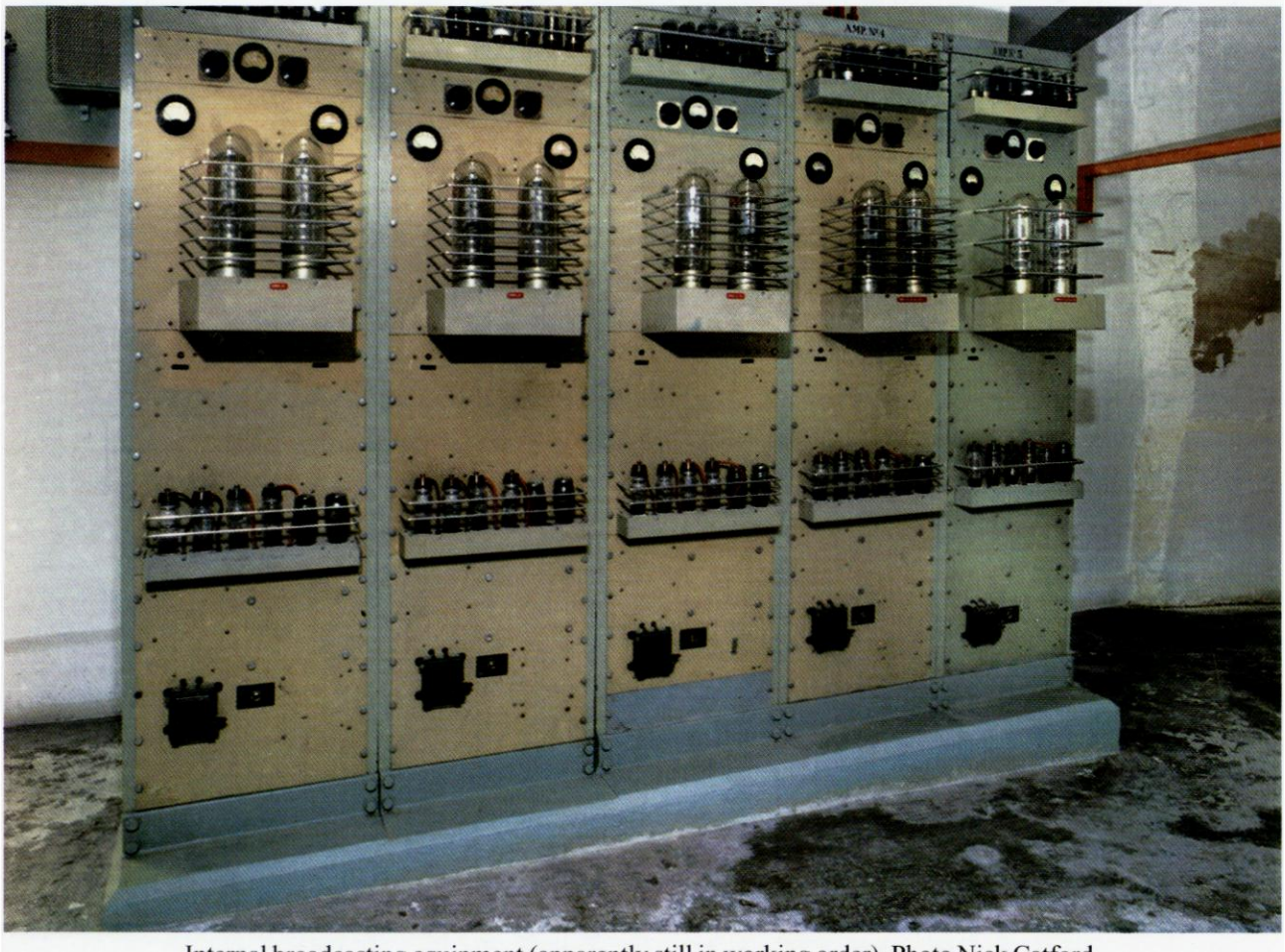
The platform area in the Tunnel Quarry ammunition depot. Photo Nick Catford

Ground defence control centre in the Quarry Operations Centre. Photo Nick Catford

Escalator A Area 11. From the late 1960s usable only as a fixed emergency exit. Photo Nick Catford.

The main GPO manual exchange in Area 8. Photo Nick Catford.

Sound proofed BBC office in Area 16. Photo Nick Catford.



Internal broadcasting equipment (apparently still in working order). Photo Nick Catford.

Map room Area 14, note adjacent conference room through windows. Photo Steve Fox

The role each due functioning department would play was reconsidered several times together with the numbers required to carry it out, usually with the aim of trying to shave down numbers. By 1961 the roles were becoming established and for a cross-section of departments can be summarised as follows:

Foreign Office

Channel of communication with allied and neutral governments. Provision of information for the Cabinet about developments in other parts of the world, etc.

Scottish Office

Assisting Scottish Ministers and keeping in touch with general government policy. Central control of civil defence operations in Scotland.

Ministry of Housing and Local Government

Major questions of policy on evacuation, maintenance of water and sewerage plant, first aid, repairs, care of the homeless, disposal of the dead, demolition and clearance of debris. Maintenance generally of local government.

Ministry of Agriculture, Fisheries and Food

Restoration of effective national control of procurement and distribution of food supplies.

Ministry of Works

Movement on a national basis of heavy construction plant. Advice on location of stores up and down the country. Assistance in reassembly of the government machine.

Canteen space Area 12 with furniture put out by the maintenance staff. Note pallets of stationery in the background.

Post Office

Maintain telecommunications with the rest of the country and with countries overseas. Maintain essential long-distance circuits and associated installations required by the fighting services. Support the Co-ordinator of Radio Plans (War).

The actual role of the military at the CGWHQ was considered on several occasions since the earliest studies. In 1961 the Chiefs of Staff Committee set up the Emergency Government War Headquarters Inter-Services Committee (EGWHISC) to review the Chiefs of Staff organisation at CGWHQ and the roles and functions of the staffs of the three services, and to try to coordinate all the matters involving the services. At this time it was thought that the role of the Chief of the Defence Staff and the Chiefs of Staff in supporting the War Cabinet would be to:

- Provide military advice to the Government about aid to the civil power
- Give broad general direction to the UK Commanders in Chief
- Provide military advice to the Government about worldwide operations
- Give operational guidance to commanders overseas
- Provide advice to the Government on the military aspects of planning for reconstruction.

Kitchen equipment in Area 12. Photo Nick Catford.

Within this structure the Commander in Chief UK Land Forces would exercise control over all UK-based armed forces and the land defence of the UK, and give military support to the civilian authorities in particular in the field of maintaining law and order.

But as late as 1963 reports were still saying that the military functions of TURNSTILE (the new name for BURLINGTON) as a whole had not been fully defined, although they were assumed to be:

1. the provision of military advice to the government
2. the conduct of military operations worldwide, including nuclear retaliation

3. provision of military support to civil authorities in the UK
4. defence of the UK against external threat.

One factor which was hardly considered by the planners was that of basic operational efficiency. The concept envisaged a complete civil and military central headquarters with several thousand people, a major but untried communications system and all their domestic accommodation and facilities being set up from scratch in a matter of days. No training was allowed at the site and this led the Ministry of Defence to suggest that a dummy site should be set up for the purpose – but this was turned down.

A 1962 report by the Chief of Staffs Committee aimed to "draw attention again to the limitations of the site as an operational headquarters in war," pointing out that it would take up to four weeks to install and work up the communications required by the armed forces. The report suggested that the concept was fundamentally flawed because:

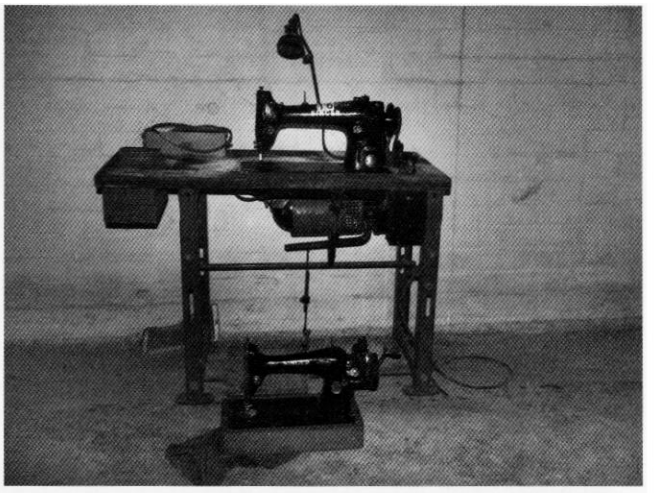
a. "There may be little or no warning of a Soviet attack in which to declare a Precautionary Period and man and prepare the site
b. Bringing the communications systems will take longer than presently likely to be available
c. It is vulnerable to destruction by a chance near-miss
d. There will always be the risk of CGWHQ being compromised and destroyed
e. The needs of security to avoid (d.) on present plans does not appear to be reconcilable with the present requirements for early manning and activation of communications."

However, despite these flaws, the plan suggested there was no viable alternative and the flaws could be overcome.

The planning and stocking were made on the basis that the CGWHQ could operate independently for at least 30 days. However, it was expected that because of its communications and other facilities it would continue to be the working centre of government until well into the recovery period even though ministers and staff might move into more suitable above-ground living accommodation once the danger of further attack and fall-out had passed.

Staffing the CGWHQ

A nominal maximum figure of 4,000 was imposed for the CGWHQ at a very early stage possibly on the basis of the physical capacity of the site, and the planning teams constantly battled to keep the demands of the various users down to this total. The 4,000 were not all to be decision-makers. There would be many administrators and common service staff as well as people running the "hotel". A quarter of the total would be needed to run the massive communications network.



Sewing machine showing the extent of the equipment held. Photo Nick Catford.

In 1962 the planned staff totalled 3,780. The main groups were:

1. War Cabinet Organisation

Consisting of 211 people, this would be the hub of the nucleus and would be physically based at its centre. There would be 24 in the Prime Minister's office supported by their direct advisers, Map Room and support staff. Accommodation was provided for 18 Ministers but not all of these would be part of the War Cabinet organisation.

2. Home Defence Secretariat

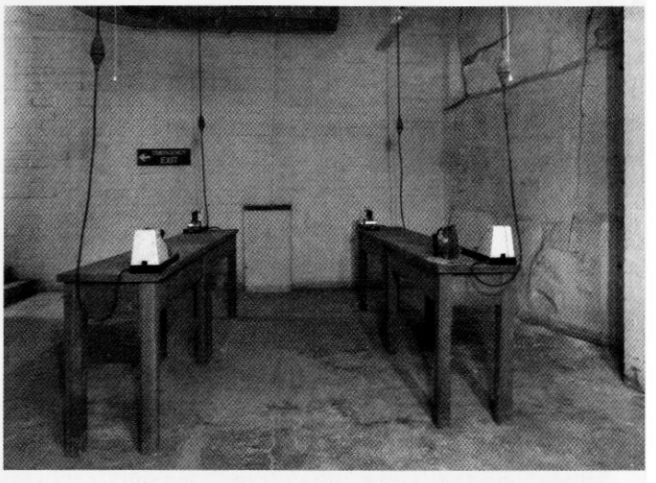
This unit of 103 people would also be at the heart of the HQ responsible for monitoring and directing the 'battle for survival' on the home front.

3. The Establishment Officers Branch

With 60 people this branch would be responsible for much of the internal running of the HQ

4. Armed Forces

This would form a significant proportion of the operational staff. It would have 626 people drawn from the Admiralty (124), the War Office (172), the Air Ministry (126) and UK Land Forces (204).



Ironing Tables. Photo Nick Catford

5. Departmental Contingents

These were drawn from most of the departments and ministries of the government and the size of each one reflected its importance in the battle for survival. The largest, with 208 staff, came from the Ministry of Power although 84 of these were part of the NATO wartime oil organisation. The Post Office supplied 154 (excluding those GPO staff manning the communications systems) and the Ministry of Agriculture 80. The 'cold storage' departments who had no immediate role in the survival period – such as the Treasury and the Inland Revenue – had only nominal numbers of staff.

6. Signals Organisation

At its heart the CGWHQ was a massive communications centre and the signals organisation was the largest group in the headquarters with 1,219 members. The armed forces would each supply a significant number of operators for their own communications centres as would the Foreign Office, but 584 of these people would come from the Post Office mainly to operate the telephone and telegraph networks. There is an interesting possibility that the Foreign Office signal operations would have been served by an all-female voluntary organisation known as the First Aid Nursing Yeomanry.

7. Common User Staff

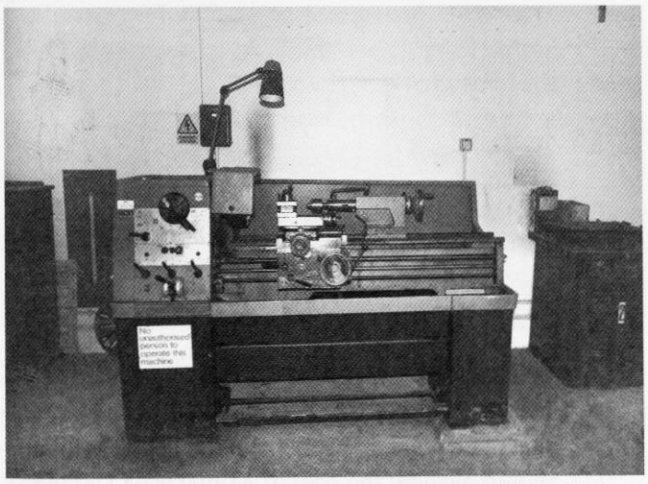
These 409 people would be provided by UK Land Forces and would provide the domestic services such as catering and medical.

8. Guard Company

This unit of 103 soldiers would also be found by UK Land Forces. Rather oddly, these troops would not be quartered underground but in the huts on the site which had been used to store the food stocks before these were transferred underground.

9. Site Maintenance Staff

The Ministry of Public Building and Works would find 53 people who would be responsible for the maintenance of the fabric of the HQ together with all its electrical and mechanical plant, air-conditioning systems, sewage works, etc.



Lathe in the workshop, Area 11. Photo Nick Catford

The original plan also envisaged rooms being found for fifteen Ambassadors (including the Ambassador of the Irish Republic) and eight High Commissioners, but by 1961 they, like representatives from the Trades Union Congress and the British Employers' Confederation, were no longer on the lists. The 1961 internal telephone directory shows rooms set aside for US and French representatives.

In an interesting correspondence between the Foreign Office and the Cabinet Office in 1963 the Foreign Office said that we "...are currently considering whether it would not be preferable to leave the French out of the arrangements – which would then be confined to the diplomatic representatives of Canada, Australia, New Zealand and the United States." But the Foreign Office ruled that as the French had nuclear weapons it would be better to retain contact with them. Later on in 1964, space had been reserved for the US (6 places), France (4) and Commonwealth (12-18).

Choosing the people

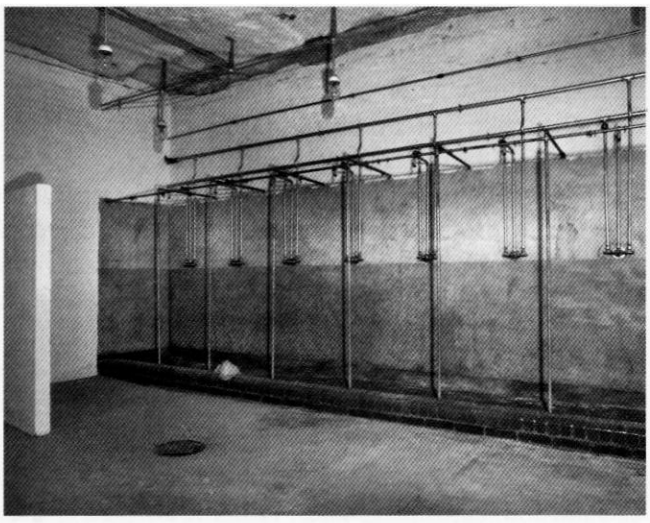
By 1958 planning had advanced to the point where the Treasury, who had overall responsibility for planning the CGWHQ and its operations, had settled the numbers of staff and issued guidance to departments on their selection. The staff were chosen on the basis of their ability to do the job, which usually meant they were designated because they had a similar job in peacetime. They were not volunteers and the vast majority of them were not told of their wartime designation.

Although the debate about whether or not to tell people of their wartime designation continued for many years it was constantly overruled by the need to maintain security. Even when permission was given to inform some designated RSG staff of their designated wartime roles, those allocated to the CGWHQ remained in ignorance. This meant that they could not receive any training for their role.

Allocating roles to named people had actually started in 1957. Establishment Officers were told to select staff who would be "physically and psychologically" able to stand up to the conditions. Working conditions would be "austere and crowded" and "there is no room for passengers". No one with a poor sick record, physical handicap or claustrophobia should be considered and "Adaptability, team spirit and steady temperament are necessary as well as physical fitness".

A later version of the guidance from 1962 said: "Conditions will be crowded and austere and staff of all grades may have to perform unfamiliar and possibly uncongenial tasks under great stress. Steady temperament, adaptability and team spirit are the qualities needed."

One concern which worried some, but not all, the planners was the position of families. This invariably meant wives, ignoring the fact that many of the staff, particularly the



Shower block. Photo Nick Catford.

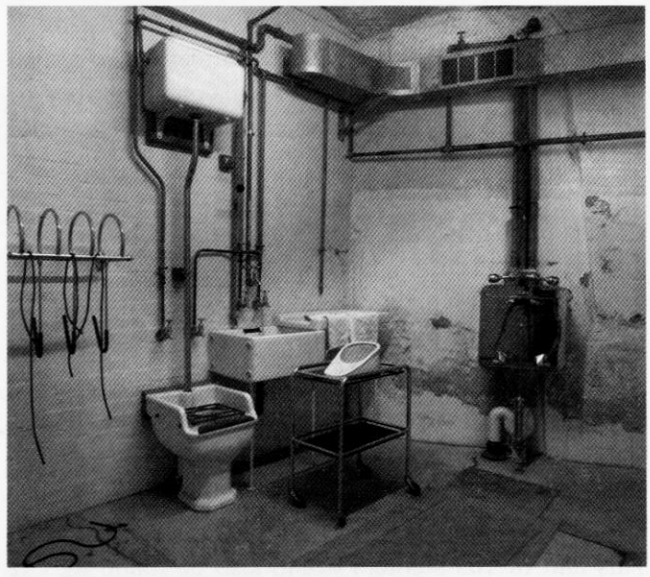
junior grades, would be female. The Memorandum of Guidance to Establishment Officers on TURNSTILE said: "There will be no special arrangements for evacuating the dependents of selected staff. Consequently those with family responsibilities who wish to act outside any Government dispersal scheme will have to make such arrangements of their own as time and circumstances permit..."

It was assumed that the more senior staff would be more likely to follow the instructions and leave their families, but this question of families kept cropping up throughout the Cold War not just in relation to the central government nucleus but to every other level of control down to the local authorities. The usual response was that the wives and children would be included in any general evacuation scheme (although in reality as the Cold War progressed this option became less and less likely), but the problem was never really tackled and it was usually just assumed that those designated would turn up on the day. It also seems to have been assumed that staff would somehow continue to be paid during their residence and that their salaries could be paid directly to their spouses.

One suggested solution to staff not turning up on the day was to provide a margin of staff to fill gaps caused by failure to report for duty, although difficult. However, as many staff were self-selecting based on their normal job this may have been impractical. In 1961 departments were still told to nominate an extra 33 percent of their contingent but they would not travel.

Another problem was lack of training including a general understanding of the post-nuclear world and the control organisation of which the CGWHQ was only the top tier. Although it was assumed that many of the staff – particularly the more senior ones – would be doing similar jobs to those they did in peacetime, many of the more junior staff would not be, and would be working in map rooms or with unfamiliar equipment. It was frequently suggested that all staff involved in home defence should be given some basic training, for example on the effects of nuclear explosions, the scale of the expected damage, the home defence control structure and so on.

However, this would have meant implying that the trainees would have a wartime role and bring some very unwanted publicity to the whole home defence organisation, so although exercises like Fallex62 invariably found that lack of training was a constraint, it was decided – essentially for security reasons – not to give any training. One suggestion for the CGWHQ staff was that the headquarters would not be able to really do anything for a couple of weeks after the attack until things settled down and organisations like the RSGs could start sending situation reports; staff could therefore be trained or train themselves during this time.



Hospital sluice room in Area 9. Photo Nick Catford.

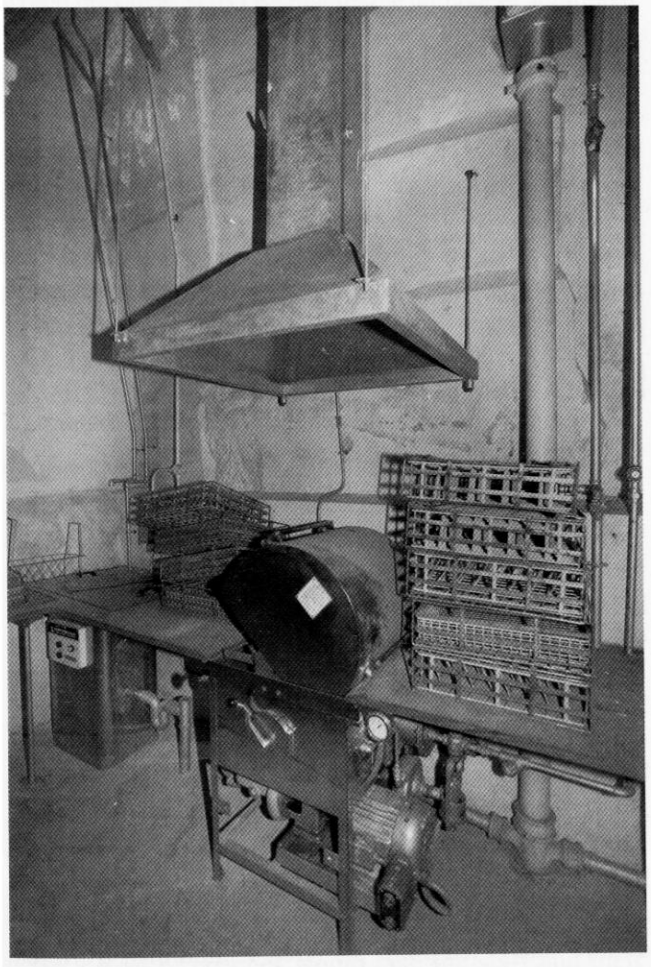
Ministers

In 1961 senior officials started to give thought to the roles to be allocated to Ministers in a war emergency and to divide them between those who would be needed in London during the Precautionary Period, those who would be sent to the CGWHQ, and those who would be sent to the regions to act as Regional Commissioners and their Supporting Ministers. Although it was usually stated in documents at the time that these appointments would be made on the day, lists were drawn up and approved by the Prime Minister although the Ministers themselves were not told of their designated role.

In August 1962 the Ministers who would stay in London would be:

- Prime Minister
- Home Secretary
- Secretary of State for Foreign Affairs
- Secretary of State for Commonwealth Relations and Colonies
- Minister of Defence (in practice it was planned that once war had broken out the Prime Minister would assume the role of Minister of Defence)

- Minister Without Portfolio
- Chief Secretary to the Treasury
- Chancellor of the Duchy of Lancaster (as Leader of the House he was assumed to stay with Parliament)
- Secretary of State for Air
- Minister of State at the Board of Trade
- The Lord Chancellor
- The Attorney General
- Those Ministers who would go immediately to BURLINGTON would be:
- Deputy Prime Minister and First Secretary of State
- Chancellor of the Exchequer
- The Minister of Agriculture, Fisheries and Food
- Minister of Health
- First Lord of the Admiralty
- Minister of State, Home Office
- Minister of State, Foreign Office
- Minister of State, Scottish Office
- Minister of State, Colonial Office
- The Solicitor General



Hobart dishwasher and (in corner) waste disposal unit. Note the extractor hood. ©M.A. Bennett/MOD/EH

The more junior ministers destined for the CGWHQ would travel with the rest of the staff but even while BURLINGTON/TURNSTILE was being manned, the Prime Minister would be expected to remain in Downing Street at the centre of an established support and communications system until all hope of averting war had gone. He and a few chosen senior people might then make a last-minute dash for Corsham by helicopter. The composition of the Prime Minister's helicopter party was fixed at 25:

- Prime Minister and two personal staff officers
- The twelve most senior ministers who had remained in London
- The Chief of the Defence Staff and the three Chiefs of Staff
- The Secretary of the Chiefs of Staff Committee
- [The remaining four places would be filled at the last moment.]

Transport

Getting the 4,000 staff to the relocation site quickly, secretly and in an organised manner would be a major undertaking. The basic plan from the early days was that the site would be manned in the Precautionary Period and then as quickly and unobtrusively as possible. The staff would establish themselves and then wait for the Prime Minister's party to arrive in the last moments of peace. Their arrival would effectively signal the transfer of power from Whitehall to Corsham.

Interim operational orders for manning STOCKWELL were issued in November 1960 followed a year later by more definitive ones. These said that once the order taken from the Government War Book had been given, the Establishment Officers would hand the designated member of staff the 'First Information Slip' which told them for the first time that they had been chosen for war role.

The First Information Slip was addressed personally and started: "Detailed plans made to meet the present emergency involve the movement of certain staff from this department. You are one of a number of key personnel selected for duty at an important war-time headquarters for the department. So far as anyone can say at the moment you may be there for about one month." It went on to say that "You should now return home, pick up the personal effects you wish to take with you, make whatever pay arrangements you wish (...) and return immediately to this office informing the Establishment Officer of your return." They were told "... not to reveal to anyone beyond your immediate family that you are going to the headquarters..."

Baggage would be restricted to one suitcase and they were specifically told not to bring a radio or a camera but "clothing may be informal". They were advised to take some pocket money and to draw an advance on

salary. Mail could be sent to them via a specially allocated army postal address (BFPO 4000) but "Facilities for entertainment will be limited. It is therefore suggested that you take a book or so with you."

TOP SECRET

FIRST INFORMATION SLIP

To be handed to those selected for special duty in an emergency on their being warned.

NAME .....

1. Detailed plans made to meet the present emergency involve the movement of certain staff from this department. You are one of a number of key personnel selected for duty at an important war-time headquarters for the department. So far as anyone can say at the moment, you may be there for about one month.

2. You should now return home, pick up the personal effects you wish to take with you, make whatever pay arrangements you wish and return immediately to this office, where informing the Establishment Officer of your return.

Security

3. You should not reveal to anyone beyond your immediate family that you are going to the headquarters.

4. You should carry some means of identification, e.g. a bank book or driving licence, or, preferably, a passport.

5. Your baggage will be subject to examination. You will not be allowed to take a wireless set or a camera.

Baggage

6. Your baggage must be limited to what you can carry by hand. It must be clearly labelled to show your name and department, and securely fastened. There will be certain laundry facilities, but you are advised to take adequate supplies of clothing, which may be informal.

Copy of page one of the First Information Slip (National Archives)

On their return the Establishment Officer would give them a very general briefing about things and they might have to bed down in their offices until the final order to move was given. When it was, they would be given the "Second Information Slip" saying: "The order to man these headquarters has now been given and you will follow the instructions given to you by your Establishment Officer." Unfortunately this told them little more than the first one and neither of the slips gave any indication of where they were going or what their role would be when they arrived. In 1961 passes were printed and distributed in sealed envelopes to Establishment Officers. If the time came the Cabinet Office would set up a "BURLINGTON Unit" to oversee the move which would have to be done "as unobtrusively as possible".

The interim manning scheme envisaged a fleet of two hundred coaches ferrying the staff from London. To preserve secrecy the coaches would drive to a checkpoint several miles from the CGWHQ and then return empty. Other coaches would then ferry the staff to the site itself.

By 1961 this transport plan had been simplified. Now the London-based departments would be responsible for organising the transport of their contingents to Kensington (Olympia) railway station near Earls Court in west London with pick-up points at such places as Horse Guards Avenue, the South Rotunda and Dollis Hill. There, under the direction of the army, they would board main line trains. The first trains were expected to be ready within two to six hours of the order to man, thereafter six or seven trains would be needed leaving at two-hourly intervals.

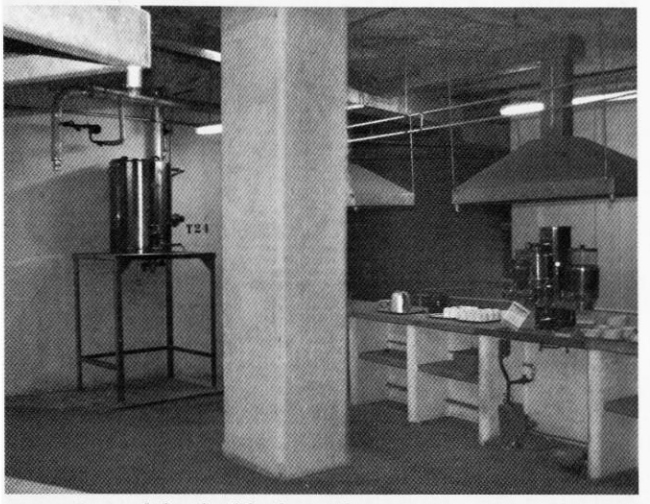
A 'second station' is mentioned in one report which would be 'in the provinces' and would serve staff working at 'outstations', i.e. not in central London. This was possibly in Bristol. The trains would take staff to a 'Check Point' from where they would be taken to the main site.

However, even if all these plans had worked like clockwork there would still have been delays, for example if the manning order were given at night or at a weekend. Then again in actually getting people underground using the available lifts and escalator followed by the problems of them finding their places in an untested and hastily prepared site. Once at CGWHQ the staff would be isolated. They would not be allowed above ground nor to communicate with their families.

Kensington Olympia in the 1950s. Photo JL Smith

The House Rules drafted in 1964 give some further insight into life in the headquarters. Security was stressed and the identity card had to be carried at all times. People had to remain below ground unless they had specific permission to leave and they could not visit other departments (note that the individual working Areas were largely sealed with very few entrance doors from the roadways). Private telephone calls could not be made under any circumstances. Shifts where appropriate would be from 0500 to 1300hrs, 1300 to 2100 and 2100 to 0500. Breakfast would be served from 0400 to 0600, lunch from 1200 to 1400 and supper from 2000 to 2200. Shift workers had similar staggered times. But tea would be served to anyone at 0100, 0900 and 1700 principally from a large double-sided "tea point" in Area 12 and also from tea trolleys. There would be a shop "open for the sale of toilet requisites, cigarettes and other goods". No laundry

would be available for private clothing which would have to be washed by the individual in the basins in the wash rooms. Sheets and pillow cases were to be laundered centrally. There were three recreation areas but no facilities are mentioned.



Part of the double-fronted tea point in Area 12.

The CGWHQ would also be 'dry'. A bar had in fact been considered and rejected, with the Planning Team reporting in 1957 that: "The provision of a wet canteen for the sale of spirits and beer has been considered and decided against in view of the austerity conditions which would prevail at SUBTERFUGE, the number of additional staff required to run a wet canteen and the difficulties of arranging supplies of beer."

Check Point

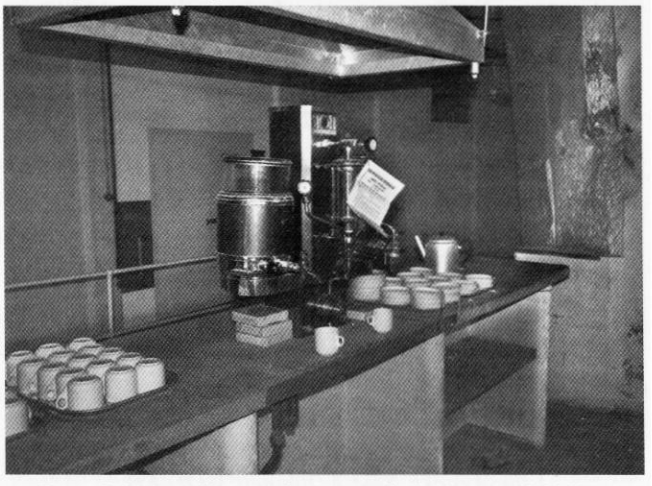
The Planning Team decided quite early that everything and everyone that was destined for the CGWHQ would first pass through an outer point which came to be known simply as Check Point. The idea of Check Point was to protect the secrecy of the headquarters site and to avoid any congestion occurring there. Everyone detailed for the headquarters whether they arrived by train, helicopter or private car would report to Check Point and then be taken onwards in an army lorry.

Check Point was also used as an assembly point for the army units with roles at the headquarters and for receiving supplies. Security would be strictly enforced and anyone turning up without the correct identification would be detained. It was expected that all the staff would pass through Check Point in a matter of hours.

Check Point would play a vital if low-key role in the operation of the War Headquarters and its location was treated with the same degree of secrecy as the headquarters itself. However, War Office records show that it would have been at Warminster, some ten miles south of the main site. As part of the manning process for the CGWHQ, trains from London would arrive at Warminster station ('Check Point Station') and from there a fleet of coaches would take the staff and their luggage to the cinema block of the School of Infantry which was based in the town and would be designated as Check Point.

On receipt of the code word – which in the early 1960s was CARONIA – the Garrison Commander of Warminster would arrange for Check Point to be manned. As the headquarters staff arrived they would be given a 'stew meal' from a field kitchen. Once the code word DETONATOR was received Check Point would start moving the staff to the headquarters in a fleet of army lorries. For security purposes the route would not be signposted but would be patrolled by a company of Military Police.

The responsibility for manning and preparation of the site rested with the Camp Commandant (Designate). The first person to hold this post was Lt Col Hugh Gregory. He took on the task in 1963 and finally relinquished it twenty years later when he was 69. He had semi-retired when he took on the post and continued to be responsible for its maintenance and in particular the supplies of food and materials working from his own home. In the event of war he would have been recalled to the colours to take up his active post.

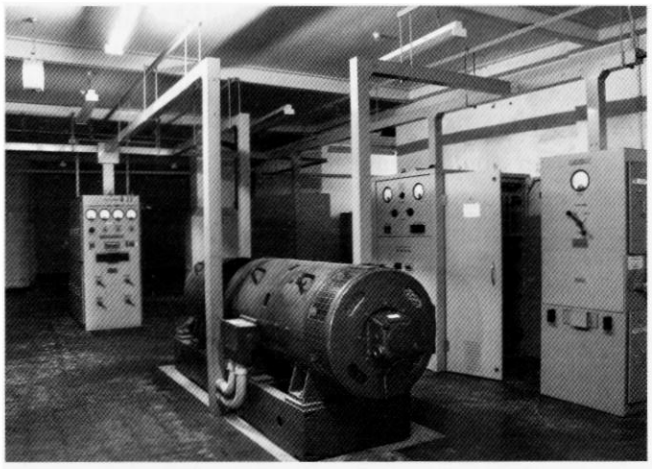


One of the 2 coffee machines made by Stotts of Oldham in the tea point. There were also boilers for tea. Note stacks of paper at the back. Photo Nick Catford

Communications

Above all, the CGWHQ site had to be a major communications centre. It would function for up to thirty days completely divorced from the surface and so, without extensive, survivable communications to points throughout Britain and the wider world, the CGWHQ would be deaf, dumb and blind. The communications would probably then allow – if not require – the site to be used as the government's main communications centre throughout the survival period and into the reconstruction period beyond.

The scale of the communications planned and finally installed at the relocation site was in every sense gigantic and within Britain was only matched for size by the systems installed in and around Whitehall. The telegraph centre alone was five times larger than any other centre



GPO converter and equipment Area 8.

in the UK. The Post Office's communications installation even merited its own codename of "woodland".

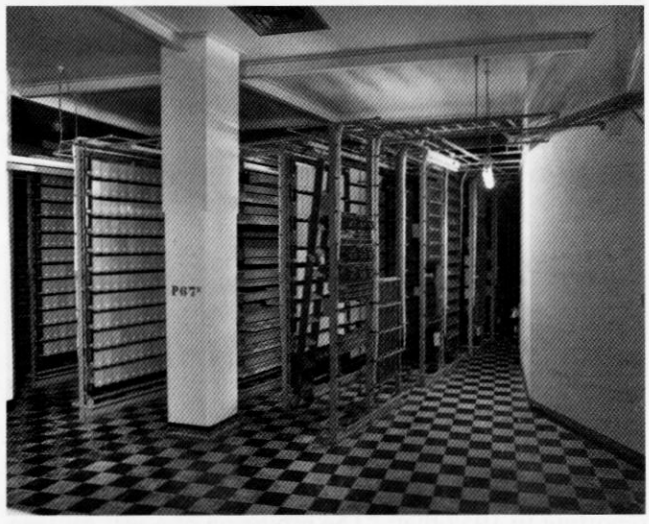
At the start of the planning process it was decided that the various communications systems would not be installed until the building work had been completed, but a dedicated Communications Working Party was set up at the outset to plan the installations.

GPO stores. There are still over 300 telephones on these racks. ©M.A. Bennett/MOD/EH

The main means of communication with the outside world would be by telegraph or telex, meaning typed messages sent and received along a cable. But the capacity of the system was limited and the transmission times were slow. This would be supplemented by standard telephone calls either using dedicated private wires or using exchanges and the public network.

The telephone and telegraph circuits were either carried on dedicated point-to-point private wires which were routed away from potential target areas or on cheaper rented GPO trunk lines; these however were more vulnerable because they were routed through major cities which might be targeted. The circuits would mainly go through RAF switching centres, particularly the major switching centre in South West Control situated a few hundred yards to the north of the relocation site giving connections to the various military networks as well as to the public trunk network.

Additionally many domestic lines would also be available through up to eleven GPO exchanges. Both systems were vulnerable in that the lines themselves could be destroyed and the exchanges and their associated repeater stations put out of action. But, despite the concerns, a study concluded that overall the GPO networks were flexible and versatile and between a third and a half of the circuits would survive an attack.



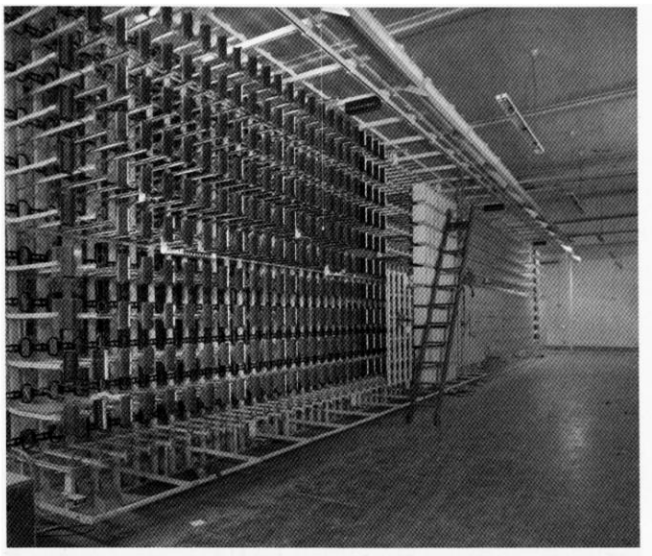
GPO frames in Area 8. Note the high standard of finish to the floor and walls. Photo Nick Catford.

As the lines were expensive to rent and carried a high staffing requirement, the Planning Team were constantly fighting off demands for additional circuits. These demands were judged against a set of basic assumptions which also shows how the HQ was intended to function:

i. Direct links should only be provided to outside headquarters which have to be controlled directly from the CGWHQ
ii. If control can be exercised by some means other than an independent link it should be used
iii. Circuits to provide alternative channels in the event of loss or interruption of communications with a particular headquarters should not be demanded.
iv. The minimum use of direct telephone links (i.e. private wires) and the maximum use of Post Office and other telephone networks should be made.

By 1958 the principal external communications links had been settled on:

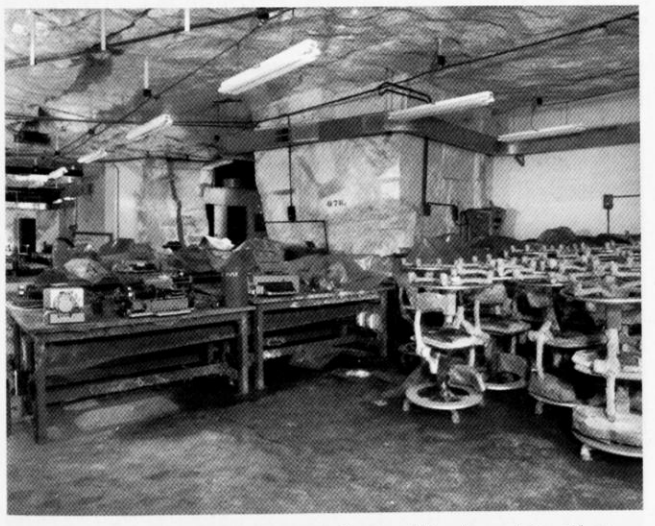
a. Three telegraph and five telephone circuits to each Regional Headquarters
b. For the service departments and the Ministry of Defence there would be circuits to various naval, military and air headquarters both at national and NATO levels, to switching centres on the Defence Telecommunications Network and terminals of their overseas networks. (The service departments wanted cipher equipment on all their telegraph circuits.)



Woodland's main distribution frame. Photo Nick Catford

c. For civil departments:
   - i Home Office circuits to Royal Observer Corps Sector Operations Centres
   - ii Foreign Office circuits to their communications centre and outstations
   - iii Ministry of Transport and Civil Aviation circuits to rail, air transport and port and shipping headquarters
   - iv Ministry of Power circuits to petroleum, electricity, gas and coal headquarters
   - v Ministry of Agriculture circuits to their due functioning headquarters
   - vi Central Office of Information circuits to BBC wartime headquarters and news agencies.

As well as the circuits within Britain, dozens of connections were needed overseas to allied and Commonwealth governments, British embassies, NATO centres, military headquarters, and others.



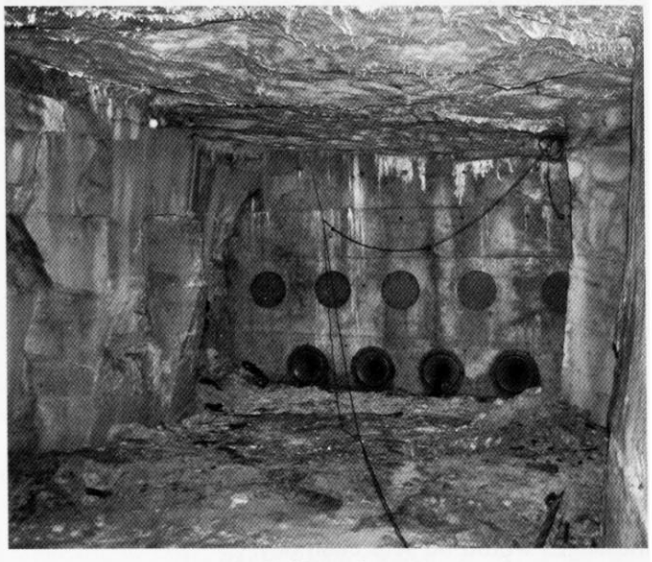
Communications equipment dumped in Area 16. Photo Nick Catford.

In 1958 a long-term plan existed for the number of circuits needed. But as none of these would be available for several years, emergency use could be made of the circuits originally installed in the wartime factory. The planned and actual number of circuits available in 1958 was:

	Long-term plan	Available
Internal phones	1,500	500
Inland phone circuits	500	22
Inland telegraph circuits	140	22
Overseas phone circuits	35	2
Overseas telegraph circuits	35	2

Altogether the 1958 plan required 767 circuits which would cost £610,000 to establish and then £919,000 a year to rent and maintain. This compares with the initial cost for the building work of £1.2 million and total Home Defence budget of about £20 million. The costs led to some debate in the early 1960s as the lines were being installed about how they should be paid for, which really meant which department would bear the bill. Eventually it was decided that the costs would fall on the Votes of the individual user departments but the bulk of the infrastructure-related costs would fall on the Post Office as the nominal occupying department.

Cables entered the site at four points via ventilation shafts and on the surface they ran in 24-inch-deep trenches. From there the majority were carried in the Post Office's three main emergency systems – the skeleton cable network of secondary carrier and co-axial cables planned to avoid major towns and city centres; the Backbone radio network; and the "all underground scheme" which involved installing underground transistorised amplifiers on certain cables to replace conventional amplifiers which were normally housed in above-ground repeater stations. There would also be many last-ditch connections into the Emergency Manual Switching System of emergency



Cable inlets.

manual switchboards designed to provide a last-ditch basic trunk network across the country.

A dedicated spur to the GPO's Backbone radio system was also installed and a radio tower for it specially built close to the site. In fact, it seems that the tower was initially considered primarily to support the extension of television services to the West Country, but by 1958 it had been decided that the tower would be complementary to the Backbone radio relay scheme.

The construction of the tower also supported the cover story that the site was a communications facility and provided cover for aerials that the army were considering installing locally. The radio link into the Backbone radio network was completed in 1964 with the completion of the latticework tower known as Five Ways. There was also a standby radio system provided by the army to link to the regional headquarters.

The telephone plan required a PABX capable of taking 2,000 extensions (1,394 were actually listed in the 1957 plan) supported by a 40-position manual switchboard for connecting to outside wires. A fourteen-position switchboard would also be needed for an overseas service. In addition, forty VIPs' rooms would be given special access to two manual positions.

The magnificent manual switchboard was located in Area 8 in the northern part of the site together with the main telegraph rooms. This area also contained a GPO repeater station, a teleprinter exchange and the internal automatic exchange. The repeater station and teleprinter exchange had a peacetime use requiring the permanent presence of GPO engineers.

There would also be extensive cipher equipment. For the inland telegraph service there were about five hundred

The main GPO manual exchange in Area 8.
Photo Nick Catford

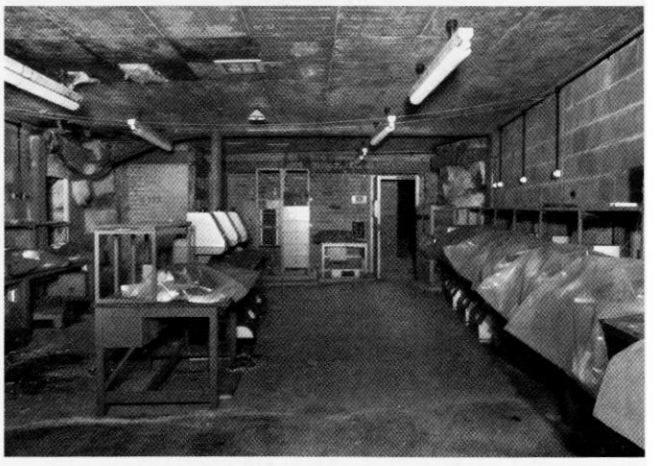
teleprinters with special equipment for overseas telegraphs. The planners anticipated 1,000 telegraph messages would be sent each day.

All incoming and outgoing written messages were handled in the communications centre further south in Area 21. This was subdivided into five operational groups because of the different ways the users handled messages:

Group 1	Cabinet Office
Group 2	Admiralty
Group 3	Air Ministry
Group 4	Foreign and Commonwealth relations
Group 5	War Office, Home Office and civil departments.

Directory enquiry desk opposite the main switchboard, complete with full set of 1988 telephone directories.
©M.A. Bennett/MOD/EH

These signals centres were grouped around a large central area used as the main combined teleprinter room. Other rooms in Area 21 serving the signals organisation included cryptographic workshops, stores, a strongroom, cipher office, a room for the Chief Signals Officer, apparatus and teleprinter rooms, messengers' lobby, tube exchange, routing room, registries and counter rooms.



Room 14 in Area 21, the War Cabinet signals group.
Photo Nick Catford.

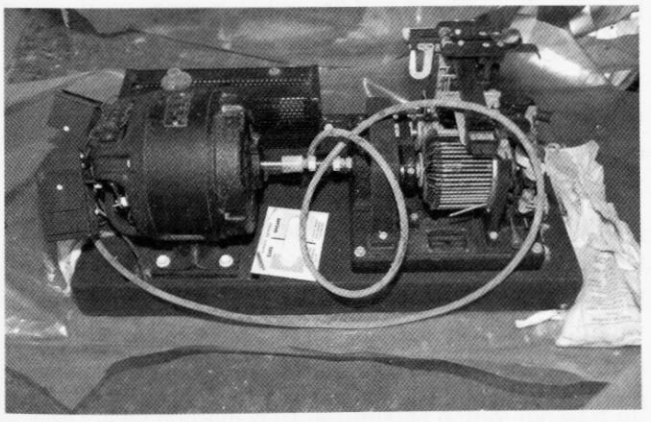
A progress report in May 1960 showed the site was still reliant on the wartime communications facilities but the requirements had now been significantly reduced to:

Inland phone circuits	300
Inland telegraph circuits	225
Overseas phone circuits	37
Overseas telegraph circuits	46

A Creed 45 perforator to produce punched paper tape for the telegraph systems. Photo Nick Catford.

In some ways the number of decision-makers and administrators that could work at the CGWHQ was dictated by the available communications. The message handling systems, telephone exchanges and in particular the telegraph machines were very labour-intensive, and whilst the administrators would work whatever hours were needed, the communications personnel would work in three shifts which effectively tripled their numbers.

The usual working figure for the communications operators was 1,024 although at one stage this was projected to rise to 1,600. This led to a reconsideration of the site's role and the rigid imposition of the idea that it was to be a high-level strategic decision-making battle headquarters and not responsible for any tactical or day-to-day control. Most of these would be telephone and telegraph operators employed either by their own departments and services in Whitehall or by the GPO.

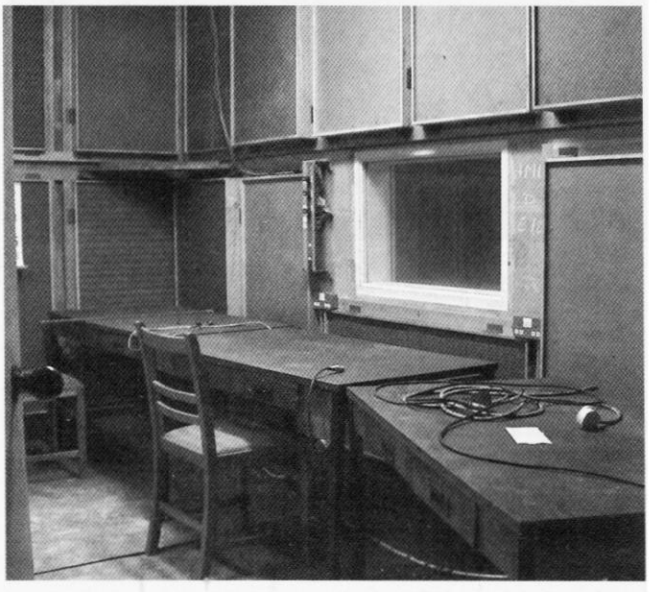


Creed tape printer for printing an incoming message onto a tape strip. ©M.A. Bennett/MOD/EH

As with furniture and stationery, most of the telephone and telex equipment was not installed in the final rooms for security purposes and circuits were not connected. But it was estimated that if the order to prepare the site were given on Day 3 of the Precautionary Period then eighty percent of the communications could be working by Day 6 – although the necessary lines to Bomber Command needed for the nuclear deterrent could be made ready within twelve hours. This was more than sufficient given the limited need for communications in the early days after the attack when the main task of bringing order to the country would lie with the RSGs. However, some estimates suggested it might take up to three weeks to have all the communications functioning.

Undulators in Area 21. ©M.A. Bennett/MOD/EH

The site had a BBC studio which would allow the Prime Minister and others to broadcast radio messages to the survivors via the BBC's emergency centre at Wood Norton near Evesham.

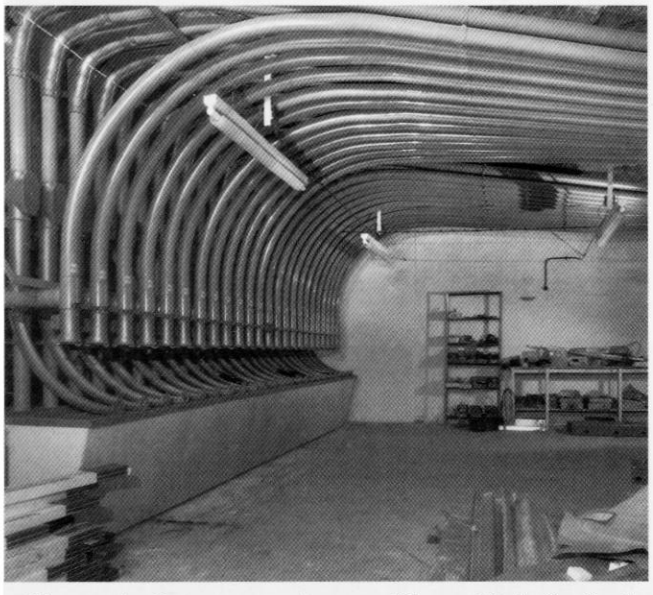


Soundproofed BBC office in Area 16. Photo Robin Cherry.

Internal broadcasting equipment. Photo Nick Catford.

There was also an internal intercom system to broadcast messages and, apparently, music around the site.

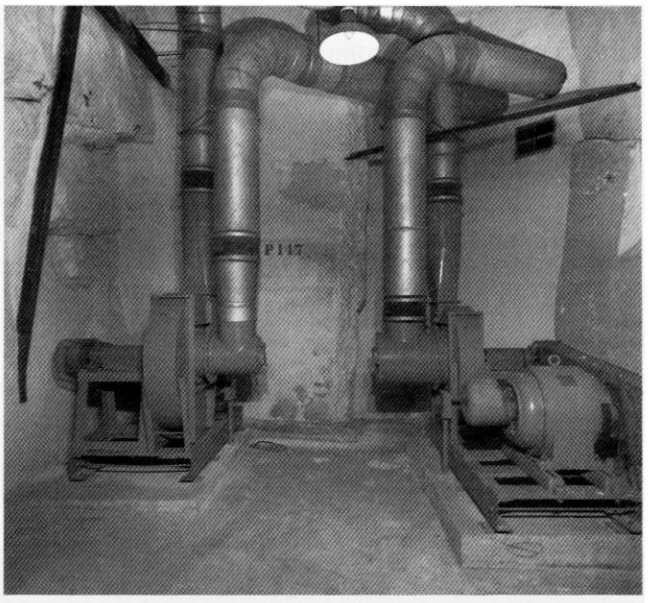
To help pass written messages around the site and particularly to and from the communications centre, a large Lamson tube system was installed with forty individual tubes connecting to a central station. The Lamson system would reduce the need for messengers but there would still be regular "messenger" runs with ten messengers operating to a regular timetable.



The main Lamson exchange. Photo Nick Catford

A central post room would be set up in Area 15 to handle all incoming and outgoing mail which would be subject to censorship. The Forces Postal and Courier Communications Service would provide a twice-daily air courier service between the Central Headquarters and the civil defence regional Headquarters. The staff could, in theory, send and receive letters and would be given a dedicated BFPO number although how this would work in a bomb-blasted Britain is a matter for speculation.

One report recommended that three helicopters should be allocated to the Headquarters. Also, six jeeps would be provided to carry visitors or senior officials on outside visits together with three motorcycles for dispatch riders. Three-ton lorries would be required from the army to transport rations, mail and other items from Check Point and these would be provided from the thirty initially required to transport staff from Check Point.



Pumps for the Lamson system. Photo Nick Catford.

One of the receive-send outlets for the Lamson system. Photo Steve Fox.

Security and the 'central secret'

The very existence of the site and everything about it was Top Secret and it was protected from the mid-1950s by a cover story. From the first thoughts of using SUBTERFUGE, knowledge of the site and its purpose was kept to the minimum number. None of the departmental planners was told the CGWHQ's location and visiting it was forbidden.

There is a heartfelt comment by a Ministry of Defence planner writing in 1962 that he had no idea where the site was and no one in the Ministry had been allowed to visit it, although he was making decisions about how it would be used. Eventually, the Cabinet Office relented and allowed "one senior officer from each service in civilian dress to visit the site" but "they must be careful what they said because most of the workers there do not know what it is for." The BBC complained, apparently

without success, that unless they knew the location of the site they could not make plans to broadcast from it.

Secrecy and security concerns had dogged the operation of the dispersal plans made in World War II and would have had a serious impact on the operational efficiency of the CGWHQ. With the increasing Soviet nuclear capability, it was thought that if the relocation site's location and function became known, it would be attacked and inevitably destroyed. Once manned and with communications, particularly radio transmissions, activated, secrecy would inevitably be lost.

In response, various options were contemplated including building a completely new site possibly bored into a mountain – and the question of the designated reserve site was also reconsidered on several occasions. But ultimately it came down to a choice between operational efficiency and security, and the needs of security were held to be paramount. Because of this, it was felt that the implications of manning CGWHQ were such that Ministers could only take the decision to man in the light of circumstances at the time. This meant that the site would not automatically be occupied at the start of a Precautionary Period and consequently STOCKWELL could not be given a substantive pre-attack role.

Abandoned bread ovens, Area 7. ©M.A. Bennett/MOD/EH

Everything about the CGWHQ – especially its role and location – was strictly Top Secret and remained so for some fifty years. The aims of the comprehensive security precautions were stated in 1958 as being:

a) To avoid disclosure of the location of the Headquarters prior to manning and for as long as possible afterwards

b) To restrict to the minimum the number of persons who, having become aware of the location of the Headquarters, have further contact with the outside world

c) To deny entry to the Headquarters to unauthorised persons.

The measures to achieve these aims included:

a) Any civilian staff designated before the start of a Precautionary Period should be positively vetted

b) All staff would be issued, at the last possible moment, with a special pass without which they would not be allowed beyond Check Point

c) A Check Point would be set up about twenty miles from the HQ. All staff, equipment, and supplies would stage through Check Point

d) Once the HQ had been manned no one would be allowed to leave under any pretext. Compassionate leave would not be allowed and it would be for the Welfare Officer to do whatever possible to ease the minds of troubled staff. Arrangements to allow staff to exercise above ground would be decided at the time.

The security of the site was to be safeguarded by:

a) All vulnerable points susceptible to sabotage would be enclosed within the perimeter fence

b) A guard company would be provided within the perimeter fence and billeted on the surface

c) Security guards would be stationed at all entrances above and below ground

d) Visitors' passes would be checked at the main gate and at the entrance to the lifts and again at the bottom of the lift

e) Visitors would only be allowed to leave if in possession of a special pass issued by the Camp Commandant.

However, in view of the stringent precautions against unauthorised access, internal security patrols and measures were not considered necessary.

Equally stringent measures were introduced to protect knowledge of and documents relating to the CGWHQ. A Top Secret "Memorandum of Guidance to Establishment Officers" on TURNSTILE Planning issued in March 1967 said:

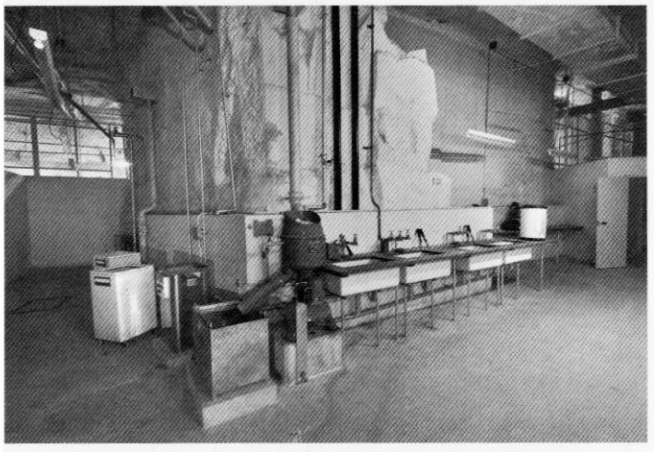
"a. The existence of arrangements for the maintenance of central Government in global war is confidential provided that the context gives no indication whatever of the nature of these arrangements

b. The existence of a single relocation site of central Government is TOP SECRET. The codeword TURNSTILE is currently in use to describe the establishment. It is confidential unless used in a context which may imply the meaning in which case the document or conversation becomes SECRET."

Three aspects were considered Top Secret: the 'central secret', that is the combined knowledge of the meaning and location of TURNSTILE; the knowledge of the location and purpose of the Check Point; and any combination of facts about the size or physical characteristics of TURNSTILE which would assist the enemy to infer its probable location.

Before a person could be informed of the 'central secret', he had to be positively vetted and sign an Official Secrets Act declaration. The process of informing the person

was known as indoctrination and was conveyed in a special interview by a senior officer when the security arrangements were explained together with the cover story and its use which was equally Top Secret. The numbers of people knowing the 'central secret' was kept as low as possible; nevertheless, in January 1961 the Site Security Officer reported that 562 people knew it.



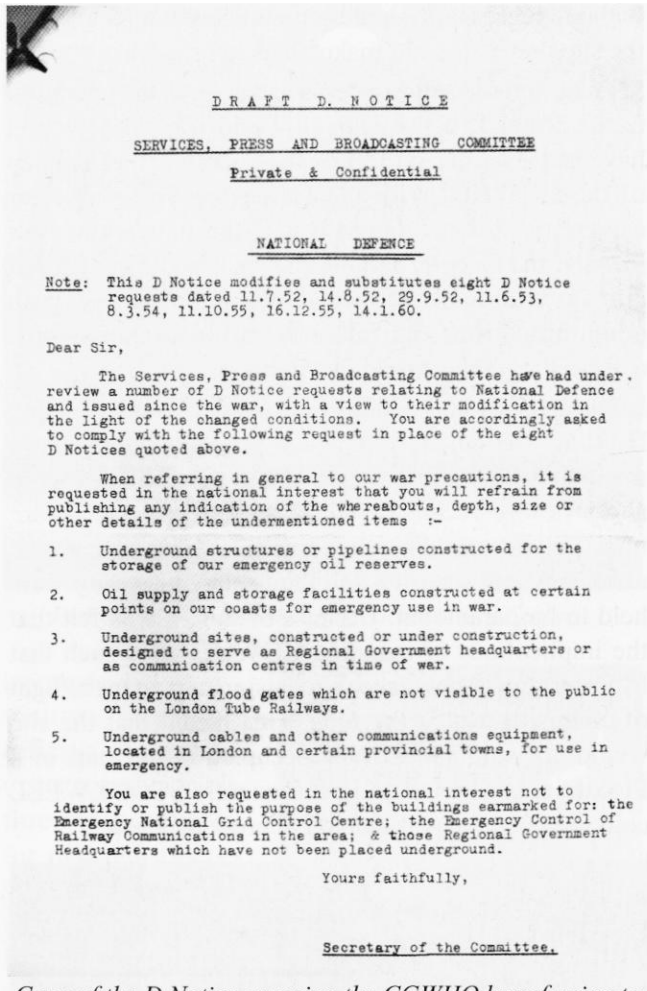
Potato "rumbler" for removing skins, Area 12.
©M.A. Bennett/MOD/EH

Documents relating to the central secret could only be typed or seen by indoctrinated personnel and passed only to a named recipient; they were "accountable documents" and subject to an annual audit.

As laid down in the TURNSTILE Security Instructions, the Whitehall Security Officer was responsible for authorising visits to the site but these should be restricted to the minimum necessary to prepare for its proper functioning. No one outside the Ministry of Public Building and Works, Post Office and contractors' staff concerned with maintenance or new works at the site could visit without written authorisation.

The implementation of the approved policy at the site was the responsibility of the Site Security Officer except for handling any "unilateralist demonstration" – that meant 'ban-the-bomb' protesters – which would be handled by the RAF Officer Commanding 24 Group in conjunction with the Chief Constable of Wiltshire (who was given the cover story). The Site Security officer was also responsible for local use of the cover story, for ensuring that activities at the site were conducted in a manner consistent with the cover story and keeping in touch with local feeling and speculation in order to assess the validity of the cover story.

Unilateralist-type demonstrations might be directed at TURNSTILE on the basis that it was a headquarters of some sort or to find out its purpose, but they should all be handled on the basis of playing down the importance of the site. No conspicuous efforts would be made to defend the perimeter even if this meant that some demonstrators would gain temporary access to the surface area; only the minimum number of civil police would be used and unless the situation developed abnormally troops would not be called in.



DRAFT D. NOTICE

SERVICES, PRESS AND BROADCASTING COMMITTEE

Private & Confidential

NATIONAL DEFENCE

Note: This D Notice modifies and substitutes eight D Notice requests dated 11.7.52, 14.8.52, 29.9.52, 11.6.53, 8.3.54, 11.10.55, 16.12.55, 14.1.60.

Dear Sir,

The Services, Press and Broadcasting Committee have had under review a number of D Notice requests relating to National Defence and issued since the war, with a view to their modification in the light of the changed conditions. You are accordingly asked to comply with the following request in place of the eight D Notices quoted above.

When referring in general to our war precautions, it is requested in the national interest that you will refrain from publishing any indication of the whereabouts, depth, size or other details of the undermentioned items :-

1. Underground structures or pipelines constructed for the storage of our emergency oil reserves.
2. Oil supply and storage facilities constructed at certain points on our coasts for emergency use in war.
3. Underground sites, constructed or under construction, designed to serve as Regional Government headquarters or as communication centres in time of war.
4. Underground flood gates which are not visible to the public on the London Tube Railways.
5. Underground cables and other communications equipment, located in London and certain provincial towns, for use in emergency.

You are also requested in the national interest not to identify or publish the purpose of the buildings earmarked for: the Emergency National Grid Control Centre; the Emergency Control of Railway Communications in the area; & those Regional Government Headquarters which have not been placed underground.

Yours faithfully,

Secretary of the Committee.

Copy of the D Notice covering the CGWHQ by referring to it as a communications centre (National Archives)

The press would be told, but only if they specifically asked, that the site was a defence installation, a communications installation both civilian and military, and an emergency store which was covered by a D-notice revised in 1962 and which covered "Underground sites…designed to serve as Regional Government headquarters or as communications centres in time of war." If pushed, the Chief of Public Relations at the Ministry of Defence was authorised to use the cover story

The cover story

A cover story had been introduced from the time the extensive construction work began to try to hide the real purpose of the site. There was a problem in that a lot of the initial construction work was carried out on the surface and obvious to passers-by. Many workers would be involved with the work both on the surface and then underground and the later fitting out, all of which would take many years. The story had to be good enough to satisfy the locals and workforce but not attract any particular interest from the press or the Soviets.

The first cover story devised was that the site had been acquired during World War II, a fact widely known in the locality, and was being generally tidied up for some general, unspecified military use. But by 1959, with the

Servery, Area 12. ©M.A. Bennett/MOD/EH

imminent installation of the massive communications systems, the idea of a purely civilian wartime use, for example as an art repository, would not match the physical work.

A particular problem would arise from the need to label where the various communications circuits were going and as these would be mainly military or government sites, it would be obvious to many GPO engineers that the originating site was a military or government one of considerable importance.

So, with the assistance of MI5 a new cover story was devised which said that the site was intended primarily as a Post Office communications centre with other space allocated to a standby regional civil defence HQ and for Government storage. The story which itself was classified as Secret was not to be generally spread around. Instead it would only be given when it was thought that someone might stumble across the "central secret" and then only if absolutely necessary, and a report had to be made every time the cover story was used.

At this stage a full-time Security Officer was appointed in Whitehall for the site whose main task was to vet staff who were or needed to be 'indoctrinated' into the central secret. The Security Service (MI5, or 'Box 500' as it was often called in correspondence at the time after its postal address) were actively involved in monitoring security and the cover story. They reported that local rumours suggested that the site was to be used to store Big Ben, as a refuge for the Royal Family or more likely as something for the Admiralty, which at this time were using other local quarries for storage. The Security Service suggested that the idea that it would be used by the Admiralty should be subtly encouraged but this raised a problem in itself because if the Soviets thought it was a significant naval establishment, they might attack it and destroy the CGWHQ by accident.

In late 1959 the *Daily Express*'s leading investigative journalist Chapman Pincher drafted an article mentioning "a huge underground city from which the nation would be controlled in the event of an H-bomb attack". Before he could publish this he was apparently fed part of the new cover story and the article which finally appeared, whilst mentioning a "chain of H-forts"(the proposed purpose-built joint civil/military headquarters), did not refer to an underground city.

By the early 1960s the Security Service was openly speculating that the Russians would be aware of the "central secret". In July 1963 the Cabinet Secretary reported to the Prime Minister that: "We have long recognised that the security of TURNSTILE is precarious." He added that in 1961 the Security Service had assumed that the Russians would have made a serious attempt to locate the Government's relocation site and given their network of agents they could be expected to have found it.

The Cabinet Secretary told the PM that it was obvious in 1959 that the journalist Chapman Pincher knew its location and purpose, and then in 1963 he wrote that "the underground citadel for central government is somewhere in the west". In July 1961 an investigation by the security services found that some unauthorised members of the armed forces and civil defence officials in the South West Region were aware of TURNSTILE. A further study the following year found that members of the county council, the fire brigade and armed forces locally were of the opinion that the site was of national importance and connected with the deterrent. Even if the central secret was not known to the Russians they would be aware that this was a site of considerable importance.

So the cover story was again revised. The site was now to "provide regional organisations with standby facilities for the maintenance of emergency services", as well as a Post Office communications centre and general storage.

But by this time the problem of the communications circuits was becoming serious. It was thought that about half could be connected and labelled without compromising the central secret and a further quarter could be disguised by connecting them to the neighbouring RAF South West Control communications centre and only connecting them through to their final destinations when needed. The remaining quarter could be disguised by only connecting them to a nearby repeater station with, again, the idea of only connecting to the final destinations when needed. To fit in with the idea that the site was a store and a possible communications centre the large number of telephones and telegraph machines and their

Communications equipment, Area 21. Photo Steve Fox.

associated equipment were generally not installed in their operational areas but were stored in various rooms underground.

The full cover story in 1967 was: "The underground site is a defence installation for use in peace and war which houses one of a number of RAF and Post Office communications centres. It has also been developed to provide regional organisations in wartime with standby facilities for the maintenance of emergency services and public utilities. The remaining space is available for Government Department storage and includes a Naval stores depot."

There seemed to be little further that could be practically done but it is interesting to note that in 1967 a letter was sent to Prime Minister Harold Wilson under the by-line of Spies for Peace saying "The government has its own shelter system at Corsham, Wilts, near Bath and it is believed that this complex shelter even extends to an entrance in the Box railway tunnel." The letter however said no more and the recommendation to the Prime Minister from the Cabinet Office was to ignore it, and it "...should be played cool by all concerned." This attitude is perhaps an indication of the declining importance by this time of the CGWHQ. But its secrecy was still to be upheld.

At several times there were proposals from various parties to develop surface parts of the surrounding military sites. These were invariably met with opposition from the Cabinet Office on security grounds – as a 1976 report put it, "...with a large-scale residential development on the "door step" of CHANTICLEER it would be possible for persons, undesirable from a security point of view, to reside there unnoticed", even though the development would be a mile from the main entrance.

There was a lot of concern at various times about the effect of other well-known military sites in the area. This ranged from the idea that the Russians would attack these as targets in their own right and knock out the CGWHQ by accident to concerns that an explosion in the adjacent ammunition depots would damage the CGWHQ. The Central Ammunition Depot had three sub-sites at Corsham:

No 1 Hudswell
No 2 Ridge/Eastlays
No 3 Monkton Farleigh.

Hudswell was a mile from the CGWHQ and was considered to be a security risk as potholers might eventually find their way into the site from it. This warning was quite prescient given the amount of effort that some people from the 1980s took to infiltrate the CGWHQ site from adjacent underground workings. Hudswell was however earmarked as a site for a 100-strong joint RAF/civil air transport operations centre and it also housed various installations providing standby electrical power supply, heating, sewage, ventilation and water facilities. These would still be needed in wartime and additionally they provided underground living accommodation for all the staffs in the complex. It was also seen as somewhere to soak up surplus heat from the CGWHQ and as an expansion chamber to soak up some blast.

Inside the Tunnel Quarry ammunition store north of the CGWHQ site. Note the much higher standard of finish than in the CGWHQ. Photo Nick Catford.

There were other relatively secret military sites in the area. The RAF South West Central signals centre was underground at Hawthorn, a short distance from the CGWHQ, and some communications lines went through it to the CGWHQ. This was a focal point for the RAF's telephone and telegraph communications in the South West. It was also used to store cryptographic material for the CGWHQ and housed a large GPO repeater station serving the immediate area and in particular the communications for the CGWHQ itself.

In an emergency RAF Box would house the Air Ministry Telecommunications War Executive, the National Long Lines Agency and the Air Ministry Landline Record Section. It also housed a GPO repeater station and the UK Warning and Monitoring Organisation (UKWMO) Sector which would amongst other things supply fall-out information to the CGWHQ.

As a postscript to the security issue there was an interesting 'incident' in 1976 when the Royal Navy commissioned a private company to make an aerial survey of the whole Corsham area which included Spring Quarry. This caused great concern and the anonymised photographs were passed to the RAF to see what they might reveal to an expert (i.e. Russian) interpreter.

The RAF noted all sorts of signs such as military-style flagpoles and anchor designs on well-tended lawns and concluded that there were substantial and significant underground facilities such as a major communications centre or a government headquarters in the area.

The Cabinet Office however decided that it would be safer to allow the private company to continue with the work rather than bring attention to the area. It was however accepted that Russian satellites had been over flying the area for several years and could give equally good resolution photos. Even if they were not aware of the true purpose of the site they must certainly know by now that there was something significant in the Corsham area.

Level of protection

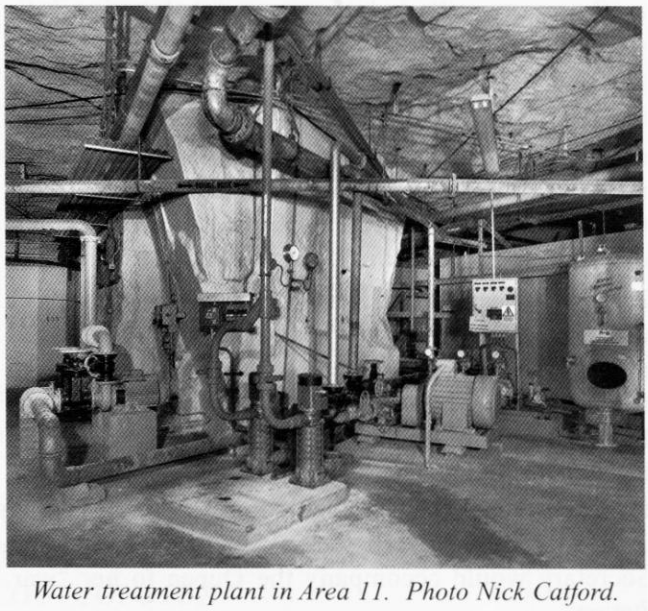
Despite the high level of security and the cover stories, it was always assumed that if the "central secret" were discovered the Soviets would consider the CGWHQ a priority target. Was it therefore proof against such an attack? Even though the site was deeply buried in hard rock the first work was to construct a blast wall designed to resist a blast over-pressure of 80 pounds per square inch (psi) completely encircling the working areas and separating them from the adjacent Admiralty storage areas. The access openings for stairways and lifts were protected by reinforced concrete head-works and blast doors also designed to take 80 psi. The main ventilation shafts were designed so that they did not open directly into the protected areas but into adjoining, relatively unimportant parts of the quarry which would act as expansion chambers and dissipate the blast.

The initial thoughts were that the site was protected against collapse or spalling caused by a 10-megaton ground-burst weapon exploding within half a mile but this was quite quickly revised to between three quarters and two miles away. By the early 1960s the planners assumed that the Soviets would use smaller 3-megaton H-bombs and the safe distance would be one mile from the impact point. However, the accuracy of missiles expected to deliver these weapons had improved and if the missile had a fifty percent chance of landing within half a mile of the site, then there would be a 99 percent chance of its being destroyed, or as the report at the time put it, of the bomb "defeating the protection".

The site was however considered to be virtually invulnerable to an air burst. In the early 1970s a Security Service examination of the site suggested that it was vulnerable to an attack with chemical or biological weapons which led to the recommendation that suitable protective clothing should be held at the site.

As well as physical damage to the site there was the problem of the various entrances and intakes which would allow a blast wave to penetrate the underground areas. One answer would be to seal all the entrances whenever there was a risk of attack. This would mean relying on recirculated air for days if not weeks when a burst was still possible as it was doubted if sufficient warning of an attack could be relied on to give time to close all the openings. The alternative would be to reply on blast valves and venturi tubes and measures to disseminate the blast such as expansion chambers. The latter would be more convenient and research by the Atomic Weapons Research Establishment (AWRE) led to adopting the venturi tube system as the main basis of protection.

The main problem was not however the vulnerability of the site itself but of its vital communications, and in particular the cables these relied on. Most of these went through the neighbouring RAF communications centre which was not protected to the same degree and a 3-megaton bomb up to three and a half miles away could be expected to put it out of action. Many of the lines also relied on unprotected surface repeater stations. The Backbone spur tower was thought to be vulnerable to a 3-megaton blast up to ten miles away.



Water treatment plant in Area 11. Photo Nick Catford.

The Queen and Parliament

The machinery of Government in War plans made during World War II envisaged active roles for both the Sovereign and Parliament. The early plans for the Cold War saw a similar role and protected accommodation was mentioned but apparently nothing came of this. From the mid-1950s it was assumed that Parliament would have no active role in World War III beyond passing the emergency legislation as quickly as possible. This would enable the War Cabinet to pass whatever laws it wished

and these would include using any of the constitutional prerogative powers vested in the Sovereign.

The Padmore working party opted not to give any suggestions as to the location of the Sovereign and the Cabinet Office War Book drafted in 1959 said that there were no definite plans for the Sovereign. There is a hint in a scribbled note from 1959 that it would be possible to accommodate a Royal Party of up to about 25 within the CGWHQ, with the alternative being to select a house somewhere, but there is nothing in the available documentation to show that this idea was pursued.

Later, a 1963 report said, "Members of both Houses would be expected to disperse to their homes or constituencies or (like members of the Royal family other than the Queen and Heir Apparent) to their country houses." Unfortunately, the file in the National Archives from which this information comes did not answer the intriguing question of where the Queen would go.

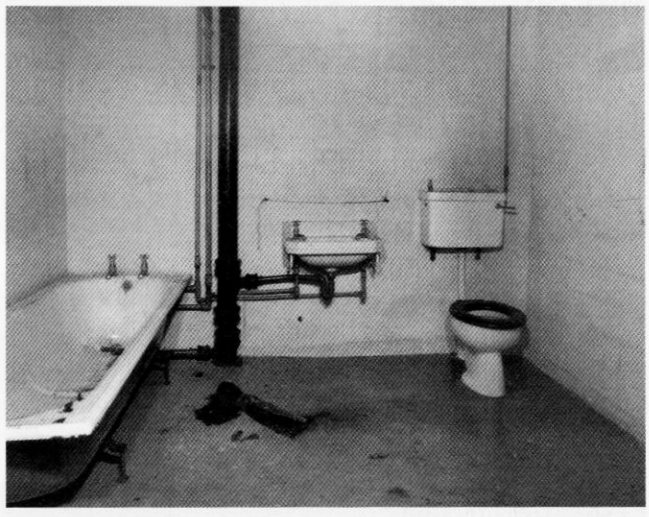
A Cabinet Office file from 1964 shows that not only did the Royal Household not have a copy of the Government War Book, it was not clear which government department was responsible for informing them of the implementation of the Precautionary Period. But in 1963 plans had been drawn up for Operation CANDID to protect the Royal Family in war.

Under this plan a reinforced Guards Battalion 1,300-strong and complete with armoured cars and a signal troop would provide a mobile escort and guard for the Sovereign and other members of the Royal Family. The impression given by Operation CANDID is that the Queen would, in a repeat of the World War II practice established only twenty years earlier, find refuge in an isolated country house probably in the Midlands. Prince Charles as the Heir Apparent would no doubt be found other accommodation.

Neither the Cabinet Office nor the Royal Household will discuss any aspects of the whereabouts of the Sovereign even during World War II on security grounds, but there is an interesting possibility. In January 1965 the Prime Minister (Wilson) approved a revised plan which is discussed later known as PYTHON for the dispersal of the government nucleus "including the proposals as regards the Royal Family" as part of which the Home Secretary would accompany the Queen to her "war station".

As part of the PYTHON planning the administrator of the CGWHQ site, Colonel Gregory, was asked, as the person who knew most about the site itself, to consider how best to reduce the operational area and in his report from 1968 he said, "The specially prepared accommodation in Area 17 is still required and the occupants will be in addition to the personnel mentioned above."

Later he recommended that only the eastern part of the existing CGWHQ site should be used for the revised plan together with Area 17 South which "...is still required 'for a special purpose'." The Cabinet Office planners who at this time had little experience of the CGWHQ did not seem to know what he was talking about and unfortunately there is nothing else in the available files; however the opening-up of the site to a few select visitors has revealed an odd set of rooms in Area 17.



The en suite facilities for "special purposes" in Area 17. Photo Nick Catford.

These appear to constitute a self-contained suite of rooms with a single door onto the corridor and which is completed to a higher standard than the main CGWHQ. The walls which are full height are whitewashed and have what may be bell-pushes of the type which might be used to summon people. This suite also contains two of the three baths in the site – the third being in the hospital. These rooms do not appear in any of the original planning documentation from the late 1950s and were possibly not built at the same time as the rest of the headquarters.

It has been suggested that this suite was for the Prime Minister but this does not appear likely as the original plans gave the Prime Minister a suite of two rooms in the heart of Area 14 where he would always be at the centre of things, and this was repeated in the reduced plans in the 1980s. Moreover, Area 17 seems rather isolated and the suite far too big for the Prime Minister alone. It is tempting to suggest that under the dispersed PYTHON concept this suite of rooms was available for the Sovereign or the Heir Apparent. This is however pure speculation and we will probably not know the Queen's real "war station" until the National Archives release a file entitled "Protection of Royal Family in Emergency", which given past experience it will never do.

The London Citadels

When Padmore suggested that all future planning should depend on SUBTERFUGE and its reserve he suggested that the London Citadels which had up to then been intended to house the nucleus of Government in war should be abandoned. But it was decided to keep them maintained until SUBTERFUGE was ready just in case

they were needed and also to hide the fact that they would not be used, a fact which would encourage a potential enemy, or anyone else interested, to look for their replacement.

In March 1956 the Working Party considered the Citadels "no better than death traps" and concluded that "it was fruitless to expect to be able control London from within after a nuclear attack." The future of the Citadels was to be left in abeyance but the Working Party finally confirmed that PIRATE had been cancelled and the Post Office could dispose of the stock of cast- iron segments which it had purchased to build it.

However, in the following year in view of the progress made with SUBTERFUGE it was decided to review the status of the Citadels. The planners noted that virtually all the Citadels were in and around the Whitehall area which would be a prime target for Soviet H-bombs. If the area were attacked, even if the Citadels were not "in the crater" they would be badly affected by flooding and "oscillation of the structure". It was decided to quietly remove any defence use from the central Citadels although the 'PERIPHERAL Citadels' at Dollis Hill, Cricklewood and Harrow could however be turned over to civil defence uses.

However, nothing should be done to the central Citadels to suggest that they no longer had a wartime use. The now former CGWR in the North Rotunda was used during Exercise Cloud Dragon in 1959 to receive information from the National Warning and Monitoring Organisation and to allow for studies about how the CGWR at the CGWHQ should operate. In 1959 the BBC asked about their broadcasting facilities in SCOUT. They were told that although SCOUT would no longer be used as an originating point for Ministerial broadcasts they should not remove the equipment from there. Any necessary Ministerial broadcasts during the Precautionary Period would be made from No 10.

Reserve sites

When Thomas Padmore made his suggestions for the preservation of the machinery of Government in War in 1954 he recommended that a relocation centre should be built at SUBTERFUGE as a reserve seat of government should London become unusable. But following the Strath Report he recommended that any idea of the government remaining in London should be abandoned in favour of basing the wartime Central Government nucleus at SUBTERFUGE from the start of a global war, but now with a new reserve site to be known as MACADAM constructed and manned to serve as 'The alternative relocation site of the central Government headquarters in global war'.

The code name MACADAM was used from 1955 to 1960 when it was replaced by QUADRANGLE. This name continued in use until 1962 when it was replaced by LINSTOCK. This code word was withdrawn in 1965.

Since Duncan Campbell's revelations in "*War Plan UK*" published a quarter of a century ago it has been generally thought that this reserve headquarters would be at the Valley Works site at Rhydymwyn near Mold in North Wales. This site included an extensive series of tunnels originally constructed during World War II to store chemical weapons. The tunnels were used into the 1950s and it appeared that some work had been done at the site after this time which fitted in with the idea that the site was at least earmarked as the reserve War Headquarters.

However, it is now known that in the early 1960s the tunnels were earmarked as a possible site for two NATO wartime agencies – the eastern branches of the NATO Oil Executive Board and the Defence Shipping Executive Board which would be located in Britain. They had originally been destined for the main Corsham site.

There was a problem with allowing foreigners into Corsham before manning, but more importantly the

In 1958 the Citadels were being used largely as general office space. The main users were:

Admiralty Citadel	Admiralty for general office space, PBX, etc
Whitehall Gardens I	War Office signals
Whitehall Gardens II	RAF signals, War Room, Map Room, registry
North Rotunda	Home Office (CGWR) and Federal exchange
South Rotunda	War Office, Cabinet Office (SCOUT), GPO PBX
Monck Street	unused
Colonial Office site	unfinished
New Public Offices	Cabinet Office, Treasury, Ministry of Works, Ministry of Housing and Local Government
Curzon Street House	Ministry of Education
Cricklewood	storage of charts
Station Z Harrow	radio sonde stores, balloon storage, library
Paddock	Post Office engineering research department
Geological Museum	Natural History Museum

problem that the agencies might need to use their communications pre-attack which would compromise the security of the site. It was however thought expedient to retain this obligation for the obvious wartime benefits it would give and, apparently of equal significance to our senior civil servants, the fear that the French would step in if Britain gave up the obligation. So the wartime site for the two branches was relocated, without NATO being told, to the Valley Works to protect the secrecy of Corsham.

There were also tentative plans to use the Valley Works tunnels as a wartime home for part of the Bank of England's gold reserves and possibly for a Sub-Regional Control. The proposed use by the NATO agencies led to the tunnels being 'tidied up' but although plans were drawn up to convert the site, it appears that no meaningful work was ever done. In 1968 D-notice protection was withdrawn from the Valley Works suggesting that it was no longer of importance.

The Drakelow tunnels

In fact, the plan from 1955 was to base the reserve nucleus at Drakelow near Kidderminster in tunnels dug out during World War II as an emergency factory. However, the planning team decided at the outset that no work would be done either to prepare the site or on detailed plans for its use until Corsham was completed.

The original working idea was that a staff of some 1,500 (2,000 in some reports) headed by a team of Ministers and senior officials would occupy MACADAM in the Precautionary Period at the same time as SUBTERFUGE was being manned by support staff and possibly a few Ministers. The Prime Minister and the 'first eleven' would however not leave London until the last minute and possibly not at all. If this happened or if SUBTERFUGE was not operational, then the Ministerial Team at MACADAM would assume the role as the central government. This would mean having three teams or echelons – the first eleven in London, another government in waiting in MACADAM and a third at SUBTERFUGE forming the basic organisation for the Cabinet when it left London.

In reality there would be many practical problems. Finding sufficient Ministers and staff for Corsham and the regional headquarters was a particular problem and this would only be worsened by the need to find 1,500 people for the reserve site. Then it was unclear what its real role might be. If the main relocation site was operational MACADAM would have no role, but if it did, its 1500 staff and very limited communications would seriously hamper its abilities to act even ignoring the problem that the some at least of the Regional Commissioners might be of higher rank or status than those Ministers at MACADAM. These problems led to the idea being put forward in 1958 that the site would not act as a true reserve but should in some vague sense be a 'reserve of experience and expertise'.

By this time the Home Office were looking for sites for the planned joint regional civil/military Headquarters and Drakelow was an obvious candidate. It was decided that the site was large enough to take the 450 staff planned for the regional Headquarters and still have space for a reserve central nucleus.

There were concerns that the existence of the regional Headquarters, which was expected to become known, would jeopardise the secrecy of the reserve site and it was suggested that the two units should be physically separated from each other although other reports suggested that they could share communications facilities. The Drakelow site was established as an RSG by mid-1961and was physically divided from the unused parts of the site which might be used for MACADAM.

Linstock

In 1961 a report suggested that the site could still be used as a reserve for Central Government but with a team of only three hundred. Even with this small number, security was deemed to be a potential major problem and it was considered that the site was very poorly protected compared to Corsham. Again nothing was done and in 1962 the plan was changed. LINSTOCK would now be a reserve but only for 100 staff although it would act as an accretion centre or rallying point for other staff (presumably including Ministers not occupied elsewhere).

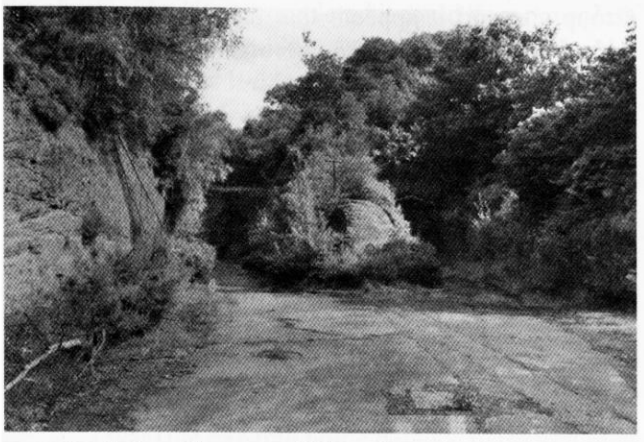
LINSTOCK was given serious consideration in 1963 and plans to convert "Drakelow Phase 2" were drawn up. It was thought LINSTOCK could have three possible roles:

1. In the event of a "bolt from the blue" attack before the main site and the regions were manned, it would be the only Central Government. It would communicate with allies, give orders to the armed forces, show the population that the Government still existed and provide a nucleus around which would centre the efforts to organise survival.
2. If TURNSTILE were inoperative for any reason but the regions still operational it would act as the nucleus.
3. If TURNSTILE were operative it would be a mere reserve.

Outline plans to accommodate this LINSTOCK group within the Drakelow tunnels were prepared and a staffing list of 100 drawn up. This staff would include a Reserve Prime Minister and Minister of Defence supported by two Reserve Ministers, one for Overseas Affairs and the other for Home Affairs.

They would be supported by a team of 37 officials to cover Cabinet Office functions, military affairs, overseas affairs and home administration. They in turn would be assisted by some sixty junior administrators, communications operators and domestic staff. If BURLINGTON were destroyed the LINSTOCK team could offer at least a nominal Central Government to

give political direction to the armed forces, liaise with overseas governments and at least suggest to the survivors that there was some overall political control.



Drakelow. These would have been the entrances to Linstock. Photo Steve Fox

Unlike earlier schemes these people would work in conjunction with the RSG team although at least initially the two sites would be kept separate for security reasons. The plan involved converting 45,000 square feet of the site to provide thirty individual offices and open working spaces. There would be only one bedroom (for the acting Prime Minister). The rest would sleep in dormitories.

The space was lavish compared to the RSG and also included a rest room, chapel, sick bay and a 600-square-foot strongroom. Pre-attack LINSTOCK would be completely independent of RSG9 but post-attack facilities would be shared. However, problems soon emerged over the cost of the necessary works which would now be five times the original working figure and the planners opted to "hasten slowly". In reality work on LINSTOCK was suspended.

TACK

Also in 1961 and in parallel with LINSTOCK, another idea known as TACK was developed. Under the TACK concept four small groups would be set up, any of which could act as a nominal 'third line reserve Seat of Central Government'. Each group would consist of a Deputy Reserve Prime Minister, one other Minister and two Private Secretaries. They would be supported by an official from the Cabinet Office and six from the military, together with two officials to deal with overseas affairs and three to deal with home affairs.

There would also be a communications adviser, an information adviser and a scientific adviser. They would all be assisted by nine junior administrators. In total each TACK group would have 30-50 members. The TACK concept was even more classified than TURNSTILE and partially to disguise it the cover story was disseminated that any of the RSGs could take over the central government and they would be ranked as Site 1, Site 2, and so on, with no locations given.

The TACK idea was that each reserve group would lodge as an independent cell in the RSGs at Dover, Hope Cove, Reading and Shipton (an early list of Ministerial appointments from mid-1961 included Reading/Warren Row as a fifth site and listed three Ministers for each). The cell could be squeezed in at Dover but accommodation at the other three sites was essentially theoretical depending on purpose-built RSGs being built to replace the existing ad hoc premises. But by 1963 it was realised that there was no money for the additional infrastructure required and in any case there was no spare space in the RSGs although it seems possible that some work was done at Dover.

A report in December 1964 on LINSTOCK and TACK concluded that: "The finished canvas creates a dismal scene..." as not only had plans not been completed, they were in a worse position than a few years before. They were both quietly forgotten.

New ideas

In May 1963 following the Cuban Missile Crisis and increasing concerns about the vulnerability of TURNSTILE, a report was submitted by Cabinet Secretary Sir Burke Trend to the Prime Minister saying, "I undertook to let you have a report about the existing plans for maintaining Central Government control during and after a nuclear attack...". The paper went on to say that TURNSTILE would be occupied during the Precautionary Stage and from this one place, after nuclear attack, would be controlled all measures necessary for:

1. the prosecution of the war
2. the conduct of Commonwealth and foreign affairs
3. the maintenance, as far as possible, of the life of the country by means of a system of Regional Seats of Government...

(We can note in passing the absence in this document of any mention of TURNSTILE as a centre for nuclear retaliation.)

However the Cabinet Secretary's real purpose is seen in the **original** draft of the report which started: "We are becoming increasingly uneasy about the existing plans for maintaining..." and he went on to describe TURNSTILE from where "would be controlled all measures for national survival" after nuclear attack, as well as the prosecution of the war and foreign relations.

Interestingly it mentioned that Regional Commissioners "...would have been told in advance which matters they should deal with themselves, and which they (if possible) should obtain direction from the central point of control..." But he said that the site would not survive even a near-miss from a nuclear weapon. He said that because of concerns that secrecy may have been compromised the Prime Minister had authorised in August 1962 the development of LINSTOCK as a reserve, although no work had yet started at the site. At the same time TACK was authorised and he said that the Dover RSG was already prepared (although other documents imply that no physical preparations were made there).

The report concluded that the security of TURNSTILE may have been completely compromised and if not then it was only a matter of time. And if it were known it would be attacked and destroyed. The report added: "It is doubtful whether valid plans can any longer be based on the idea of concentration" and any alternative to TURNSTILE would suffer the same fundamental weakness.

Not much confidence was put in LINSTOCK or TACK on the basis that they were housed in RSGs which were almost certainly known to the Soviets, and if the Russians attacked them then they would inevitably and by accident knock out all the back-ups to TURNSTILE. The suggested answer was to change to a completely different type of organisation based on dispersal, even mobility. But several alternatives were offered:

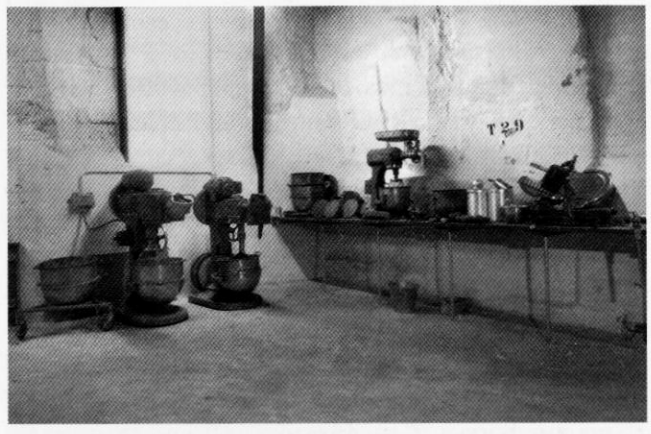
- The construction of a genuinely nuclear bomb-proof redoubt
- Flying the Central Government abroad to, say, Canada
- Putting the Central Government to sea – above or below the water
- Putting the Central Government into a mobile column or columns of specially protected vehicles
- Dividing Central Government control into a number of different functions which would then be dispersed on a self-contained basis around the country.

In fact, the dispersal idea had been expressed in greater detail in an early draft of the paper. This mentioned setting up several political as well as administrative units. After nuclear attack the senior surviving political unit would identify itself as the seat of government. Under this scheme "something would still remain at TURNSTILE because it is too valuable an installation to abandon entirely" and significantly for later developments, it continued "...One point for examination will be the extent to which it might be possible to preserve TURNSTILE, for as long as we can, as a cover story for the new master plan. This in itself will be helpful if we can keep it in the plan but as something other than the potential seat of government."

The report recommended a study should be made. This received the Prime Minister's approval and the report was complete by March 1964. It recommended "...a scheme of dispersal involving a number of Groups, initially referred to as ACID groups, each with the power to take over the functions of Central Government in war, self-sufficient and in a pre-arranged order of priority, which would be determined by the seniority of the Minister in charge of each Group."

These groups would have the advantages over TACK/LINSTOCK in that they would not be tied to an RSG and each Group could have more than one potential site. TURNSTILE was still too valuable an asset to discard but its role would be studied further. The Machinery of Government in War Committee suggested it could be a Group site and it appears that this idea was initially adopted although there were concerns about its vulnerability.

The role of each Group which could be up to 150 strong was summed up as "... to contain the potential supreme political authority, with vestigial administrative staffs" and to "...retain control of the conduct of the war, negotiations with other Powers, and overriding authority for the Regions..." The plan was approved by the Prime Minister (Douglas-Home) in June 1964 and detailed planning proceeded although in the interim the existing CGWHQ plans would continue.



Kitchen equipment in Area 12. Photo Nick Catford.

ACID and PYTHON

The ACID concept was protected by a higher level of security – "Top Secret - ACID" – and handling ACID-related information was the subject of a special set of instructions. These said that "Information covered by the codeword ACID may not be revealed to, and ACID documents may not be seen by, anyone not specifically indoctrinated for the purpose." Indoctrination could only be approved by the Chairman of the Machinery of Government in War Sub-Committee.

The instructions said that "...every effort should be made to avoid committing ACID matters to paper", typing could only be done by ACID-indoctrinated personnel, and documents must at all times remain in the possession of indoctrinated persons. If an ACID document had to be sent to another building, "...it must be packaged by an ACID-indoctrinated person in two covers, a box or pouch when used being treated as the outer cover"; the inner cover should be wax-sealed and addressed personally to a named recipient; the outer one should be simply addressed and not marked Top Secret or ACID. (Similar instructions were issued to cover TACK.) By November 1965 the dispersal concept had been code named PYTHON and ACID Groups became PYTHON Groups.

Planning for the project which was overseen by the Home Defence Committee was intended to be a once and for all affair, with little material preparations, so that once the planning had been completed it could lie more or less dormant. PYTHON planning was unaffected by the decision in January 1968 to put the bulk of home defence measures on a "care and maintenance" basis which effectively meant they were abandoned. PYTHON arrangements went live on 1 May 1968 and replaced the plans for a full-scale CGWHQ.

It was thought that PYTHON central government would still be viable if:

1. There were three to four weeks of political warning of severe deterioration of the international situation prior to the outbreak of war (the existing home defence plans assumed a two to three day warning period)
2. Ministerial authority to take key measures to set up the control system were taken at the beginning of that warning period.
3. Some expenditure was allowed for specifically PYTHON purposes.

The functions of PYTHON Groups were basically the same as had been given to the CGWHQ:

1. The ultimate control of military forces in the UK and broad control of military forces overseas. The senior surviving PYTHON Group should [sic] be able to exercise positive political control over all nuclear forces
2. Conduct of Commonwealth and foreign affairs
3. Overall policy direction of the control of air transport, merchant shipping and ports
4. Ultimate control of essential resources and supplies, and of arrangements for resupply from overseas
5. Coordination of the activities of Regional Commissioners as necessary and possible, and resolution of questions involving more than one region which cannot be resolved otherwise.

Each Group would be led by a senior Minister designated to act as Prime Minister, supported by two other Ministers charged primarily with overseas defence affairs and home affairs respectively. Ministers in each Group would have advice on overseas affairs, home affairs and defence questions at about Permanent or Deputy Secretary level, with military advice at four-star level.

The early plans said that there should be eight groups, but although the exact number was and still is heavily classified it appears that there were originally five.

The letter of appointment to the Officer in Charge of TURNSTILE outlined the new plan and the place of TURNSTILE in it. The job of the Officer in Charge would be to bring TURNSTILE to a state of readiness for use by Central Government after attack, and for reporting after the attack had been made on its readiness for use. He was told that plans for the maintenance of Central Government in war provided for the dispersal, before the attack, of PYTHON groups each headed by a senior Minister. When Government from London ceases the head of the senior PYTHON group will assume the duties of Central Government.

The dispersed PYTHON groups will be supported by three dispersed sections each of two other important agencies of Central Government, namely the United Kingdom Supply Agency (UKSA) and the National Air Transport Agency (NATA). There would be some 130 staff in a UKSA section including ten commodities experts, eg for milk, meat and tea from private industry, and fifty in each NATA one; a total of some 1,200 people.

Bath in the hospital, possibly the only one in the original CGWHQ. Photo Nick Catford.

UKSA and NATA

Post-attack the activities of the surviving groups and sections would be coordinated by the senior surviving PYTHON group. One of its earliest tasks would be to decide on the best place to assemble surviving groups and sections. In some respects the provision of adequate arrangements for the procurement and allocation of supplies was the most important single aspect of PYTHON planning, and this, if not the viability of the whole concept, hinged on communications within the UK and certain points overseas.

TURNSTILE would, because of its communication links, particularly with overseas agencies, be the primary accretion centre for the various groups and the aim would be to bring them together within seven days after the attack had ended.

UKSA would be responsible for the procurement, allocation and sea transport of essential supplies for the UK and for overseas countries dependent on UK resources. UKSA would also coordinate sea and air transport. A UKSA group was divided into a transport and oil distribution section; a procurement and allocation section served by a common services group; and an army CONRAD signal troop

Woodwork shop, Area 11. ©M.A. Bennett/MOD/EH

The principal tasks of the food element of a UKSA section would be:

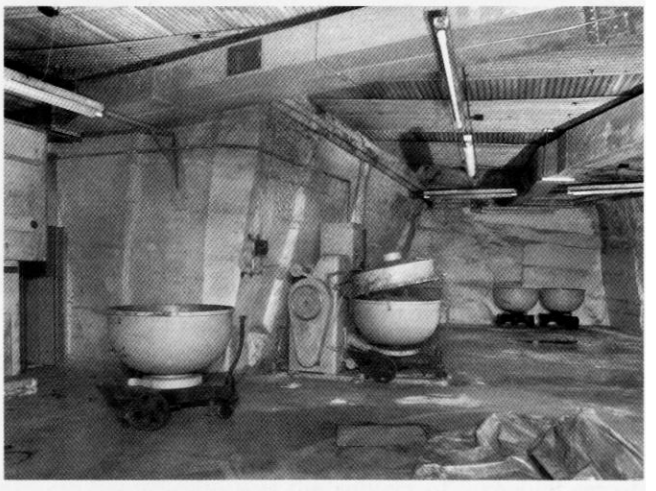
1. Making a broad assessment of the effects of the nuclear attack on food stocks (including the strategic food stockpile) and agriculture
2. Making a broad assessment of the likely food requirements in individual regions of the UK having in mind that many of the more remote and sparsely populated areas might have received very large numbers of additional population, and, when known, of overseas countries dependent on UK resources
3. Planning and executing the procurement of fresh supplies from overseas (to assist with this aim British embassies were grouped and would assist UKSA with the availability and requirements for shipping). It would also be the UK point of contact with the NATO civil wartime agencies concerned with supplies
4. Controlling the allocation of fresh supplies (including the strategic food stockpile) and the reallocation of other existing supplies in the UK, if need be.

Trade advisers for UKSA were selected in the late 1960s and "doers" were looked for. One potential candidate was dismissed as "…surely too old and too gentle". In 1982 as part of a general review of civil preparedness MAFF was asked by the Cabinet Office to review their designees for UKSA positions and the designees had to be "of good general health including mental stability" and "preferably be aged 45 to 55 years".

When approached and asked to volunteer, the designated non-civil servants were given a general briefing and told that they had been selected for "home defence duties in war, related to dispersed Government service out of London". However they were not specifically told that there were no arrangements for their families. If they asked, they would be told that some arrangements would need to be made with a hint that they could make their own arrangements. As before, civil servants designated for roles in the groups were told nothing.

The scale of the task faced by UKSA can be seen from a report by MAFF in 1960 on post-attack food distribution. This found that the UK would need to import around one million tons of food a month with the chief need being for wheat, sugar and carcase meat. It was expected that the eastern seaboard of the USA and Canada would be badly hit and no supplies could be expected from there for three months. Argentina and the old Commonwealth countries might be less affected and willing to help but there would be the problem of payment. Overall it had to be assumed that no significant supplies would reach the UK in less than four months.

The National Air Transport Agency (NATA) would control comprehensively, as part of central government, both the surviving strategic air transport force and the internal UK transport and communications aircraft (to this end, the idea was to disperse the transport aircraft of the RAF and British airlines to "haven" airfields around the country).



Abandoned bakery equipment in Area 7. Photo Nick Catford.

According to instructions issued in 1979, when the order to prepare was given PYTHON staffs would be picked up from five designated points around Whitehall. In a procedure virtually the same as that planned for CGWHQ staff in the early 1960s, Departmental Establishment Officers would warn the designated staff although under PYTHON they would receive a preliminary warning before being given the "Initial Movement Instructions". These told them to go home, collect their one bag or suitcase and return to their office. In an exact repeat "clothing may be informal" and they could expect to be away for about a month. Families could write to them at BFPO 4000, the same number as used for Corsham.

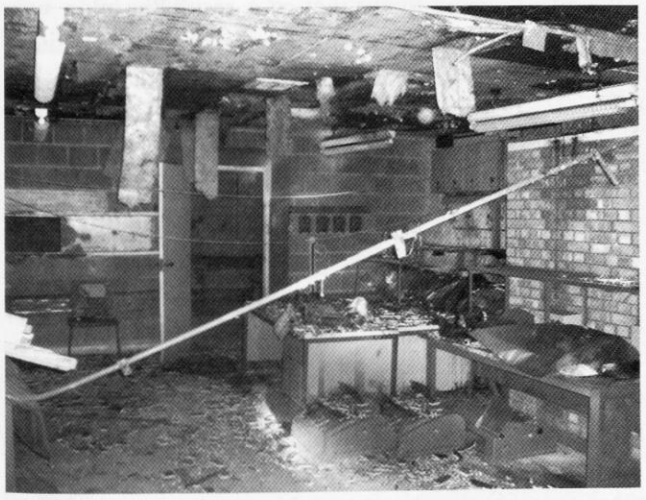
Food and accommodation would again be free "but may be austere" and still "facilities for entertainment will be limited". On returning to their offices they would be held until the decision to man was finalised when they would be given the "Final Movement Instructions". They were to act as inconspicuously as possible and they would be briefed that they were "…a group of civil [and military] officials being deployed for Home Defence purposes".

Interestingly, the briefing said they would probably be moved by air.

One of the original concerns about PYTHON was the difficulty of communications. It is possible that the sites for the groups would have had telephone circuits either pre-existing or perhaps, if in Government-owned buildings, specially installed. However the main communication system would be a special home defence radio network known as CONRAD. This was a single channel HF radio teleprinter system which was improved by 1980 to a higher capacity, more mobile, radio relay network.

The original CONRAD 1 system would have 66 mobile radio stations working through one (later three) large lorry-borne GATEWAY stations serving armed forces HQs including the regional Armed Forces Headquarters and links into selected radio stations to provide communications overseas. More importantly perhaps, it would serve the dispersed PYTHON groups. The signals troops came mainly from Territorial Army Signals Regiments under the command of 2 (National Communications) Signal Group (later Brigade).

Although no longer required for its original role, the Machinery of Government in War Committee decided in 1967 to retain TURNSTILE even though it might well be attacked because "Such costly headquarters should not be discarded lightly." TURNSTILE was retained because of its value as an accretion centre if it survived. It was however realised that if TURNSTILE was retained and work and planning allowed to continue, albeit in a reduced and disguised form, it would serve to keep attention from PYTHON on the basis that if it were abandoned people would inevitably wonder about its replacement. This meant that it would have a deception or decoy role as well as an accretion one although this was kept even more secret and some planners were not informed. Instead they were given a cover story.



Abandoned communications equipment showing the effects of damp. Photo Steve Fox

By this time the planners thought that the Precautionary Period would only be two to three days rather than the seven originally planned for and this would not give sufficient time to man TURNSTILE on the planned scale. This allowed most of those who were in on the central secret to be correctly told that it would be impractical to try to establish the CGWHQ with the planned 4,000 staff, but it would be possible to move 600 – 700 in the shorter period to produce an embryo of Central Government.

This however was really the cover story to protect the PYTHON concept. Knowledge of the PYTHON concept was limited to a very small group of Ministers and senior officials, and a wider circle of individuals with limited access to Machinery of Government in War plans remained under the impression that the plan to activate the CGWHQ at Corsham during transition to war was still current.

A paper from July 1967 on manning scales for TURNSTILE under the PYTHON concept headed "Top Secret - Acid – to be seen only by ACID-indoctrinated personnel" said: "... it is intended that TURNSTILE should be manned during the Precautionary Stage by a relatively small maintenance and communications party with the prime functions of providing suitable advice post-attack to the PYTHON Group in control on the advisability of using TURNSTILE as an accretion centre, notably its structural condition and communications, and, if this accretion was agreed, of making preparations there for the reception of the PYTHON Groups (and perhaps of National Agency sections)."

Planning would therefore proceed on the basis that the number of staff at TURNSTILE post-attack, excluding common services staff sent there pre-attack, would not exceed six hundred. The plans assumed that two PYTHON Groups, one UKSA section and one NATA section, with a total staff of 435 would survive the attack. This could allow for a reduction in the permanent staff at the site. At the time about fifty employed by the Ministry of Public Building and Works and fifteen by the Post Office worked there.

The revised ideas meant that the exact numbers who would assemble at TURNSTILE post-strike were uncertain, but a 1968 plan suggested having dormitory accommodation for 750 (including 100 female staff) in Area 15 with individual bedrooms for 22 VIPs in Area 22. The Prime Minister would retain rooms 34 and 35 in Area 14. At this time the Ministry of Public Buildings and Works were spending around £120,000 a year on maintenance (£10,000 on cleaning, £38,000 on day-to-day maintenance, £22,000 on security and fire patrol and £50,000 on electricity).

Some time later a nominal total figure of 1,000 to include the various maintenance and support elements as well as the PYTHON ones was adopted for planning purposes. A study made in 1978 said that that accretion would take place by N+30, that is, 30 days after the end of the nuclear

attack, and possibly by N+15. The nominal 1,000 staff might then consist of:

2 PYTHON groups (134x2)

2 UKSA groups (145x2)

military support 86

civilian support 100

R Group (the advance party to prepare and the support the site's operation) 256

Food stocks would be held for the R Group for 30 days before the nuclear attack and 15 days after and then for the 1,000 for a further 45 days. Fuel would be stocked for 90 days but stationery and medical stores and other stocks for 60 days.

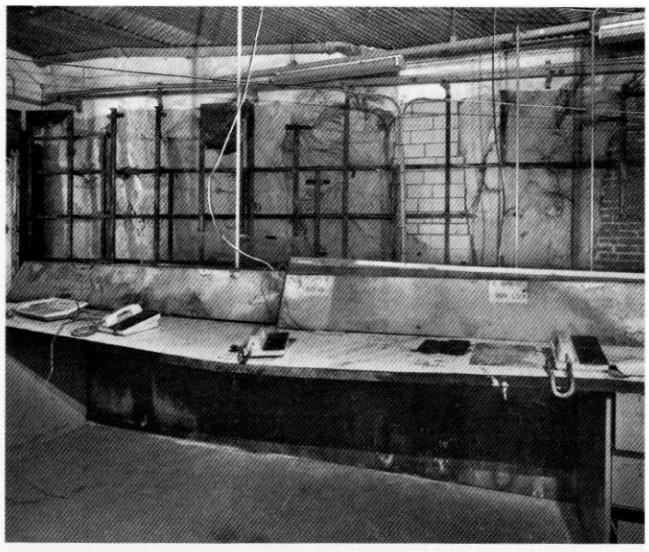
Changes at TURNSTILE

This reduction in numbers meant that the accommodation and stocks at TURNSTILE should be reviewed and reduced. One of the first signs of the reduction in facilities at Corsham was the removal of half the emergency rations in July 1968 by the simple expedient of not replacing the stocks due to be turned over.

Active consideration was now given to reducing the size of the maintained area. A report by the Ministry of Public Building and Works pointed out that the site had been built as a whole with, for example, the air intake and electricity generating station at one end and the water supply and sewage disposal at the other; it would be costly to move some of the operations such as the hospital, telephone exchange and canteens. Colonel Gregory as the man on the spot was asked to draw up a scheme to reduce the operational area in use at TURNSTILE. He proposed restricting the active area to the eastern half of the site by splitting it along a centre line running north-south along South Main Road.

This would entail some relatively minor refurbishment such as moving the laundry to Area 12. Under this scheme the eastern section was physically barricaded off from the western section which would be largely abandoned. This was the simplest solution because the eastern section contained most of the indivisible features and the air-conditioning arrangements allowed it be split from the west. Only the eastern section would retain air conditioning although it would still be dependent on the main air intake and the main power house in the western section.

Even if the western section were abandoned, access would still needed to the plant and the section would need partial ventilation. The Ministry of Public Building and Works suggested some of the abandoned areas in the west could be taken over by the RAF as fall-out-protected living space. This is probably the origin of the Quarry Operations Centre built into the northwestern corner of the CGWHQ site to provide protected accommodation and a defence post for the Corsham site as a whole.



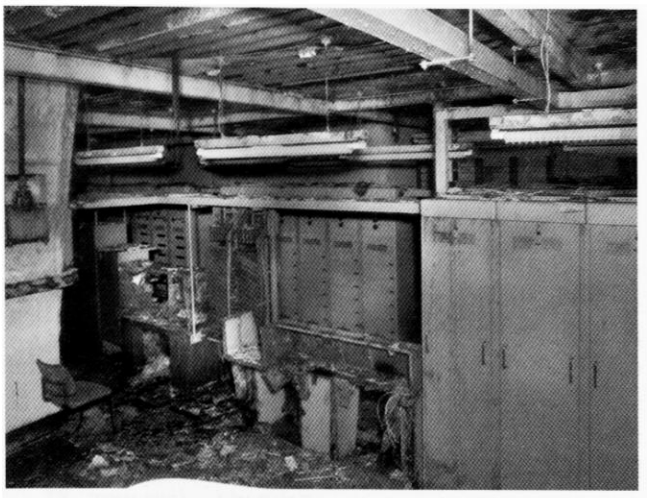
Quarry Operations Centre.
Photo Nick Catford

The code words TURNSTILE, PYTHON and ACID were replaced in July 1970 by CHANTICLEER, PEBBLE and FILCH respectively (although for the sake of simplicity this article will continue to use the word PYTHON). These changes were made as a precaution because a destruction certificate for a classified document could not be found, with the possibility that it had been lost. PEBBLE was then changed to RUBBER in 1982 and RUBY in 1983. FILCH was changed to CLARET and then SIPPET. From 1979 the codeword FLEX was allocated to protect those aspects of the arrangements at Corsham that might reveal that Corsham no longer hosted the CGWHQ.

The whole concept of PYTHON was based on dispersal and the concern that Corsham could not be manned in the two to three days available. However, Exercise Beachcomber held in 1975 found that it would take up to seven days to deploy to PYTHON sites which put a question mark over the basic reasoning behind the new concept. It seems likely that as a result the plan was modified so that only a nucleus of the groups would initially be deployed with the aim of becoming effective within 48 hours. The rest of the members would join later possibly even post-attack.

Another exercise, Precise, held in 1982, showed that the civilian posts for PYTHON had still not been fully filled and as with every exercise held at this level throughout the Cold War, it found that communications were slower than desired.

The basic PYTHON concept is, according to the Cabinet Office, still the basis of current planning. It is, therefore, surprising that so much information about it has been released, but there is one aspect which was considered more secret at the outset and this continues today. This is the locations of the sites where PYTHON and associated groups would disperse to. Even lists from the 1960s are considered too sensitive but some hints have been given.



Room 30, Area 21, local telephone exchange supporting the communications centres now showing the effects of damp. Photo Nick Catford

The planning team rejected the idea of airborne and mobile groups but apparently did not dismiss the idea of sending one overseas and putting one into a ship. We know that the sites would all be in Government hands.

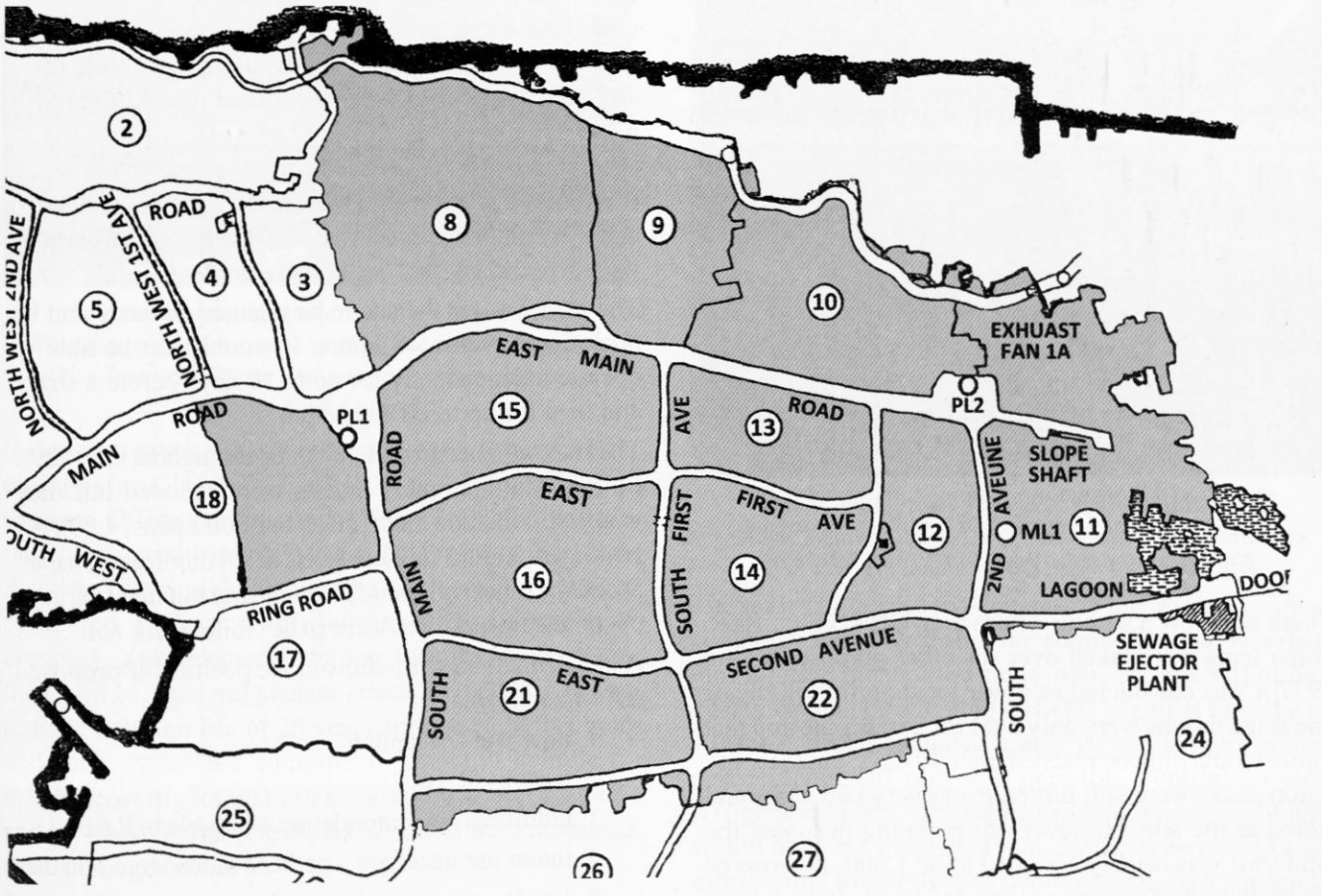
Discussions in the mid-1960s about a wartime home for the Bank of England's gold reserves show that the former ROTOR radar site at St Twynnells was a possible site. Two connected sites under the control of the Home Office in the South East are mentioned which sounds very much like the former RSG co-located at Warren Row and Whiteknights Park in Reading. However, it could also refer to the then civil defence training school at nearby Sunningdale which later became the Civil Service College. And if this was a site, then the training centre at Easingwold which survived the 1968 cuts to become the Emergency Planning College is an obvious possibility.

If we are looking at former RSGs, the site at Nottingham which did not have a publicly known role after 1965 bears some consideration. It also appears that one PYTHON group would be put on board a ship and some people have pointed to three ships built in the 1960s for the state-owned Caledonian MacBrayne ferry company such as the MV *Columba* which appear to be ideal to take say 150 people, and apparently were fitted with an unusual amount of radio equipment. But when asked directly what ships were used for PYTHON purposes, the Cabinet Office gave two names – the RFA *Engadine* built as a helicopter carrier, and HMY *Britannia*.

Unfortunately they will not be drawn further, but perhaps one day these secrets will be revealed.

CHANTICLEER and Albatross

Under the new concept for Corsham only Areas 8 to 16, 21 and 22 were retained in active use. But the site still needed maintaining and at one stage concern was raised that one of the ventilation shafts would collapse. Additional water storage was installed but it was reported that the lifts, boiler house, and other services needed



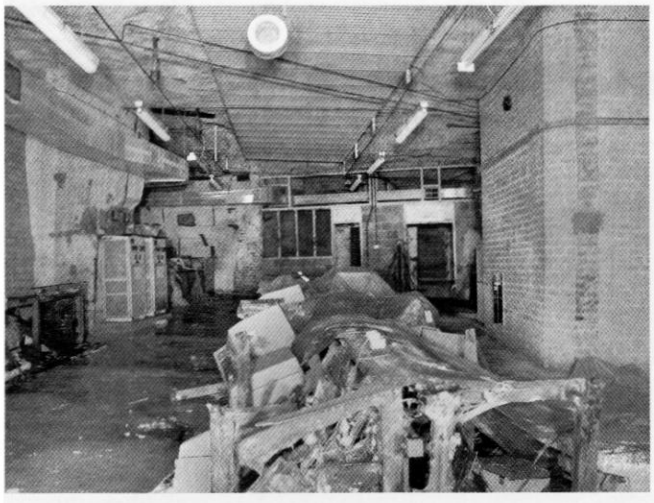
Plan showing in grey the reduced area of CHANTICLEER

updating; the escalator no longer worked and could only be used as a fixed staircase for an emergency exit. Surplus equipment, notably for telecommunications, was often simply dumped into unused areas and left to rot.

Maintaining the CHANTICLEER site was an expensive luxury at a time when most home defence and civil defence expenditure was pared to the bone, especially as its role was potentially just as a decoy. There was some active consideration made in 1976 as to whether it should be retained but it was decided that the situation was even more in favour of its retention than a decade earlier.

Although the communications had been reduced since 1967 the scale of the remaining communication facilities still made CHANTICLEER an excellent accretion centre. A report concluded "...as CHANTICLEER is such an excellent accretion centre if it survives, and costs so little to maintain, notwithstanding its assumed vulnerability it should be retained as an accretion centre unless there is an overwhelming case to the contrary".

In 1976 the site still had its original quantities of stationery and the perishable items were turned over on a regular basis. Secrecy was still a priority as shown by the decision in the mid-1970s to prosecute Duncan Campbell for possessing, amongst other things, photos of Backbone masts; photos of the Five Ways mast at Corsham were specifically and deliberately left out of the prosecution evidence.



Traffic Hall, Group 5 Signal Centre, Area 21 now containing several Creed Type 144 teleprinters which date from the 1970s. ©M.A. Bennett/MOD/EH

There was now a surplus of space in CHANTICLEER. Some parts were taken over for other purposes and in 1977 it was considered as a war location for UKLF. At one stage rations were only held for 250 people and that figure would only be reached after 30 days, but the army ration packs were still turned over every two years and stored at the site. However, for planning purposes the total staff was usually assumed to be 1,000. In terms of function the 1,000 were expected to break down into:

Home affairs	100
Defence and overseas	150
Supplies (shipping, oil, food, etc)	200
Communications	150
BT areas	100
Administration and services	300

At this time the School of Infantry at Warminster, formerly the home of Check Point, was tasked with providing a Special Duties Force which would take care of all the administration and domestic duties at the site. The numbers for each role show how the potential manning of the site had fallen since its heyday. The Special Duties Force consisted of:

Administration	16 (Camp Commandant, Quartermaster, Chief Clerk, staff)
Fire Party	13
Guard Company	33
Messing section	25 (including 9 cooks)
Laundry section	9
Hygiene and medical section	19 (including a doctor and a dentist)
Motor transport	3
General duties	25

The Special Duties Force – together with 41 building, construction and engineering staff provided by the Department of the Environment and 74 communications staff – would now occupy the site at the start of a crisis but the site would have no role in any period of tension or conventional war. After the general nuclear attack it would provide '...protected accommodation for selected control elements in the event of a general nuclear attack on the UK' and act as an accretion centre for the PYTHON groups who would act as a basic Central Government.

The plan was for the site to be manned covertly and be operational within 48 hours. It would then be able to operate independently for up to 30 days before a strike and then for up to 60 days after.

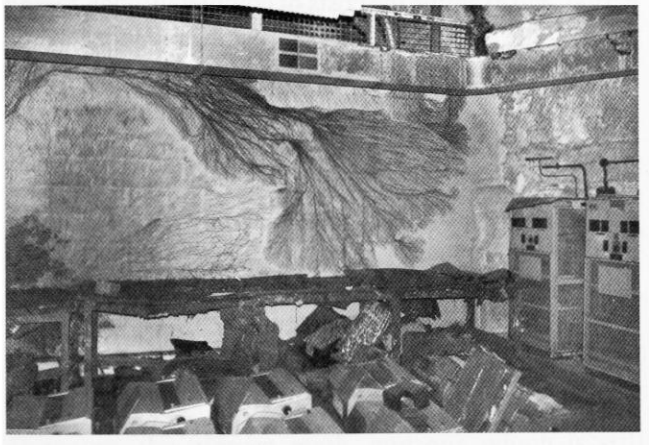
The site continued to be maintained throughout the 1980s. In 1980 the stationery stocks were reduced but they would still include 3,000 black ballpoint pens, 4,000 A5 writing pads and 3 million sheets of A4 duplicating paper. Stocks of toilet rolls were also reduced but now, perhaps of some comfort, they were to be 'toilet rolls, soft'.

A check made in 1981 showed the position or proposed use of each Area:

1 now wet – abandon
2 used by RAF
3 additional accommodation available to RAF
4 future use uncertain – perhaps ration store – in use
5 future use uncertain – perhaps storage of art treasures – in use

6 now wet – abandon
7 now wet – abandon
8 BT area
9 dormitory area
10 office accommodation
11 PSA workshops and water storage
12 canteen/laundry
13 offices
14 office accommodation
15 offices and dormitory
16 offices and BBC studio
17 now wet – abandon
18 now wet – abandon
19 PSA workshops and power station
20 ration store
21 BT area
22 dormitories and office accommodation

Areas 8 to 16, 21 and 22 were specified as TURNSTILE. Despite the reduction in the used area, annual maintenance costs in 1981 were running at around £300,000 per annum and operating costs, mainly electricity charges, at £200,000 per annum.



Telegraph equipment and rectifiers in Area 21. Note the fungal fan on the wall. These fans are a result of the damp conditions and are by themselves famous. Photo Nick Catford.

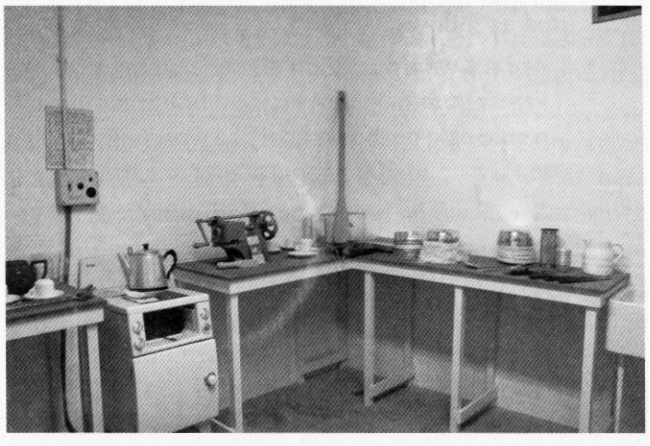
It does not appear that there were many infrastructure changes at CHANTICLEER because in 1981 the Cabinet Office commissioned the "Project Albatross feasibility study report" from the Property Services Agency. This would look into the means of "providing a protected enclave within an existing underground complex... for selected government control elements in the event of a general nuclear attack on the UK." It was to have a design life of 25 years and take 1,000 people and their associated equipment. It should be able to operate covertly for up to 30 days before a nuclear attack and for 60 days after (the stocks of rations were increased at this time to 60,000).

During this time it should be able to operate in a completely closed-down state for up to seven days. It was thought that this could be done without extracting carbon dioxide from the air or adding oxygen as there would be a gradual leak of air from the facility which could be replaced by small amounts of air drawn in through the existing filters.

Unlike earlier designs there was now a requirement for protection against conventional bombing. It was thought that a direct hit at the surface by a 1,000-kilogram semi-armour-piercing bomb would produce only minor spalling underground but a 5,000-kilogram general purpose bomb could cause local collapse of the underground areas. However, there was more concern that these bombs could penetrate the protected headworks of the various shafts, entrances, etc and the study recommended reinforcing these.

There was also a requirement to proof the complex against the electromagnetic pulse given off by a nuclear explosion which it was thought could damage electrical equipment, even underground. The study however concluded that it would be expensive and difficult to protect against a pulse even 80 feet underground but nuclear, biological and chemical protection would be possible by installing decontamination rooms where people from outside could wash and change their clothes.

The study also recommended a four-metre-thick reinforced concrete wall to surround the operational areas, extra protection for shaft entrances and blast valves and the building of internal shelters to protect people and essential plant from spalling and local collapse.

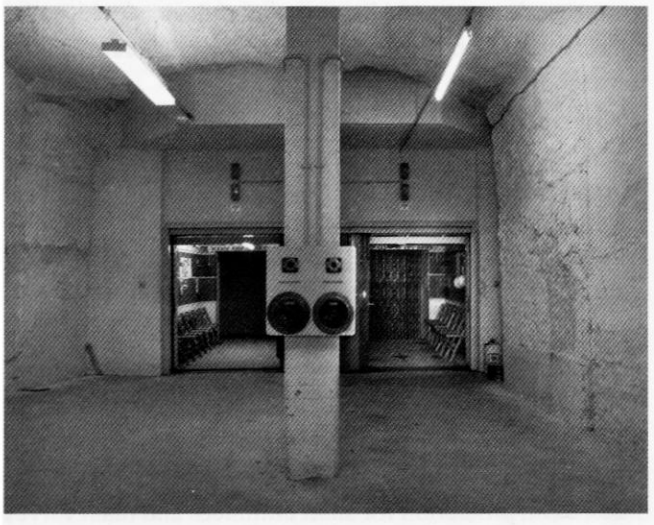


The hospital kitchen with equipment put out by the maintenance staff. The machine to the right of the kettle is a Buttapatta for making pats of butter.

The study considered five schemes to incorporate various combinations of Areas but the common thread was that they all used most of the areas in the eastern half of the quarry beyond the existing CHANTICLEER boundary. All the schemes included a new lagoon to store water and replacement power generation, ventilation and refrigeration plant. Unlike the original scheme, cooking would be based completely on compo-type rations and most people would sleep in two-tier bunks on a hot-bunk basis.

There were serious drawbacks with all the schemes. In particular, they would cost between £21 million and £31 million, would take four to five years to complete and the whole complex would be out of action during the refurbishment.

This led to the consideration of a "reduced area scheme" which would only use Areas 8,9,10 and 11 together with as much of the existing plant and machinery as possible. East Main Road would be retained from PL1 to Area 11 with a spur to ML1. The reduced facility would be bounded by a security wall. Entrance would be via a refurbished PL2.



Passenger lift 2. Photo Nick Catford.

The scheme would still cater for 1,000 people with the areas used as follows:

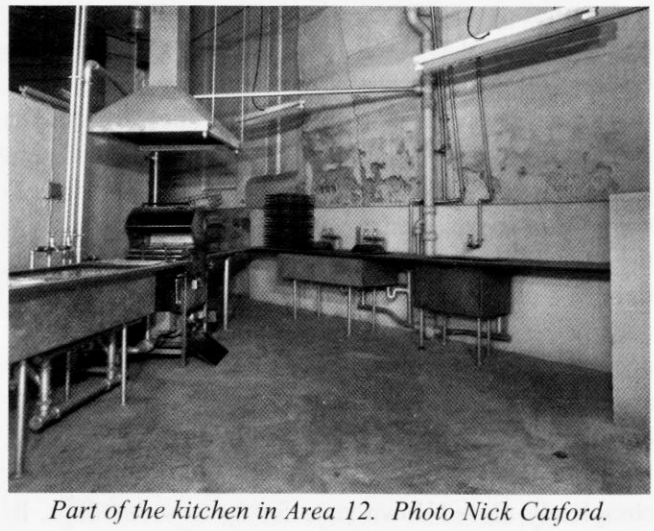
- Area 8 would contain all the communications together with conference and briefing rooms. It would also be the main office working area able to take up to 500 people at any one time.
- Area 9 would be the main dormitory area. There would be single bedrooms with en suite showers for ten VIPs (Prime Minister, Ministers and Chiefs of Staff) and 24 single bedrooms. Most of the staff would sleep in dormitories in two-tier bunks. Existing toilets and showers would be used but chemical toilets would be provided as a back-up.
- Area 10 would house the sick bay (the existing hospital area with a sick bay of ten single beds, one operating theatre and associated facilities to cope with simple complaints) together with dining and rest rooms, the kitchen and a small laundry. A sealed-off part of this area would also house new diesel generators and their fuel store.
- Area 11 would house the existing lagoon and sewage ejector station together with a new reservoir with associated water purification and pumping plant.

The scheme did not go ahead due to the inherent problems in the site, notably its vulnerability to conventional attack and nuclear electromagnetic pulse, and the unreliability of some of the plant. By this time there was only one operational communications centre (in room 34 Area 21). Much of the unwanted communications equipment in the other rooms was simply left because it was more convenient to abandon it than recover it.

Remarkably, much of it is still there. British Telecom, as the successor to the GPO, reported that the telephone switchboard was 40 years old and recommended its replacement, but the 1,600 line Strowger-type automatic exchange was still operational. The teleprinter equipment was obsolescent but considered good for another five to ten years.

However, it appears that again nothing happened as a result of the feasibility study (other than another name change) and in 1988 the Cabinet Office, faced with the growing costs and obsolescence of PERIPHERAL, commissioned a new Project Albatross Design Study which would continue the work of the 1982 study. It would now cost the 'minimum area scheme' but interestingly would also consider the possibilities of setting up the site so that it could be made operational within a 28-day period, and examine the costs of completely abandoning the site. The latter would include making redundant some forty people working at the site.

The study was based on using the same accommodation and numbers as before. Mention was made of psychological relief being provided by the Medical Centre but "Mortuary provision has not been considered". Unlike for the original facility, consideration was now given to working conditions and the general internal environment. It was suggested that "selected green foliage plants" would assist with purifying the air as well as having a psychological benefit. PL1 would be abandoned as the entry point in favour of PL2. The reduced site would not need continuous guard patrols and the plant would be run in fully automatic mode during normal conditions so that the dedicated maintenance staff could be reduced to five.



Part of the kitchen in Area 12. Photo Nick Catford.

The Study which included plans for a BBC studio was still based on 1,000 potential staff and included lists of proposed telephone and telex circuits; this is interesting to compare with the numbers actually provided thirty years before. Private circuits would go to:

- the emergency manual switching system centres at Worcester, Reading and Merthyr Tydfil
- RGHQs 7.1, 9.2, 4.1 and 1.1
- UKWMO Bath
- BBC Wood Norton and Caversham
- MoD Rudloe Manor
- NATO Civil Wartime Agencies, Cambridge
- BT Defence Network at Shepton Mallet and Oswestry
- Defence Communications Network Rudloe Manor
- Rugby and Somerton radio stations
- 14 circuits to various military HQs and communications sites such as Boddington, Croughton, Fylingdales and Pitreavie.

There would also be 20 exchange lines.

This scheme was costed at between £27 million and £36 million with a construction period of five years. It was not pursued.

Myths and misunderstandings

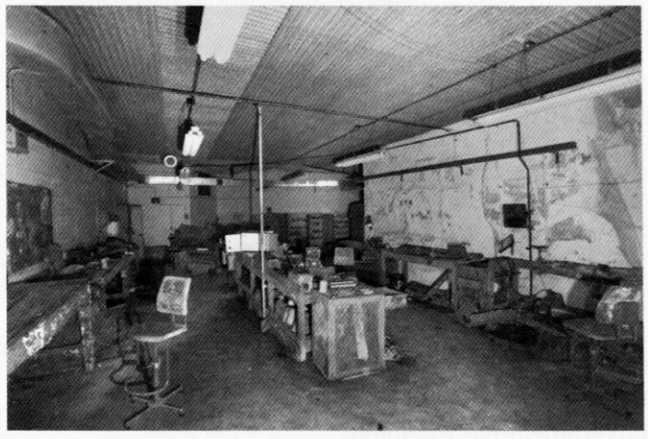
For years before it was declassified many people knew or assumed that there was something interesting at Spring Quarry but the understandable reluctance of the Government to confirm or deny anything spawned a variety of myths about the site. Many related to its size. It was supposedly an underground city for 7,000 people complete with rows of shops, sixty miles of roads, an underground railway and was powered by its own nuclear generator.

However, the biggest myth, and one which is still regurgitated dozens of times on the internet, is undoubtedly the supposed existence of a full-size pub underground, usually called the *Rose and Crown* and apparently based on a Whitehall watering hole.

The ammunition depot to the north was known to have underground platforms which had been used to unload ammunition trucks during World war II. This led to suggestions that trains full of civil servants would go directly from London and be taken inside the CGWHQ via this underground branch line.

This also encouraged speculation that these railway lines or others deep inside Spring Quarry were used to hide a secret "strategic reserve" of steam trains. Perhaps these arrived on the secret underground railway line said to stretch from Whitehall to Corsham.

At one time, nearby RAF Rudloe Manor had some role in receiving reports about UFOs which some people believe to be alien spacecraft. As it was "well known" to these people the "the Government" had captured some of these craft and their occupants, Spring Quarry was an obvious place to hide them. None of the visitors to the site since its declassification has seen anything but perhaps this just means that the aliens have been moved elsewhere.

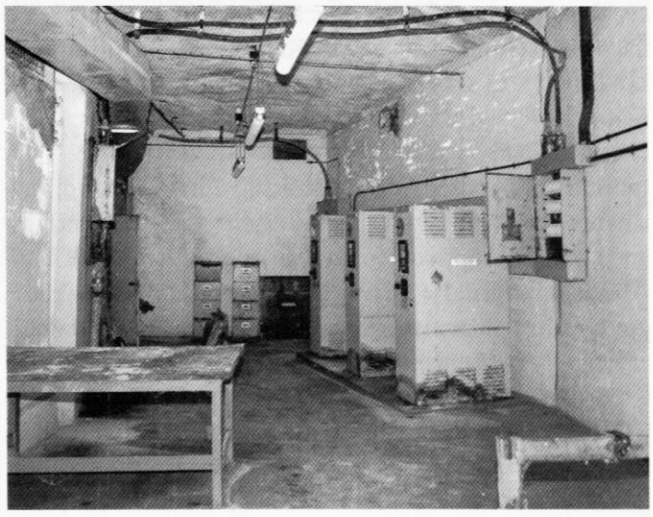


Technical workshop, Room 27, Area 21. ©M.A. Bennett/MOD/EH

The regional dimension

The CGWHQ would look in 2 directions. Its main role was to look outwards, to oversee as far as possible any remaining fighting, liaise with allies and to try to acquire food and other vital materials post-war. But it also looked inwards as the national governing body to organise the country in what were known as the survival and recovery stages after the nuclear attack. From the outset the CGWHQ was seen as being able only to provide a very limited government for the country largely because of its lack of information about what was really happening outside its cavern and its difficulty in communicating and enforcing its decisions. So from the time they conceived the CGWHQ Padmore and his successors saw that there would be a need for a lower level of government which would direct the struggle for survival at the regional level.

During World War 2 Britain was divided into 11 regions including Wales and Scotland (Northern Ireland was not



Brentford AC regulators, Area 21. ©M.A. Bennett/MOD/EH

included) and a Regional Commissioner was appointed for each region. The primary role of the Regional Commissioner was to co-ordinate the response to enemy air raids but he also had a more secret role which entailed taking over completely the functions of central government in the region if the central government in Whitehall or its evacuation sites was unable to function.

Padmore later proposed building on this idea and from the mid-1950s the country continued to be divided into regions each with a Regional Commissioner although these men would now be appointed from amongst Cabinet level ministers and would act as the central government for the region from the time of a nuclear strike. Together with a staff drawn from central government the Regional Commissioner would operate from a purpose built joint civil-military headquarters. At this time it was thought that civil defence measures would serve a meaningful purpose and so the headquarters would also serve as the headquarters for the army district which would provide military back up to the Civil Defence Corps and, in particular, to help maintain law and order in the devastated cities. The purpose built headquarters were however never built due to lack of money and although in theory ad hoc premises were earmarked in reality nothing was done. This was of little importance whilst the CGWHQ was being constructed but when it became operational the lack of any structure for regional government would have meant that it would not have been able to pass down even the strategic decisions it would try to make and would have meant that there would have been effectively no government for the country above the level of the county council.

By the time the CGWHQ became operational things at the regional level had developed and the joint civil-military headquarters had evolved into Regional Seats of Government. This change of designation reflected a change in emphasis in civil defence. It was realised that faced with the carnage and dislocation that would follow a hydrogen bomb attack that the traditional "bringing aid and succour" approach to civil defence was not credible. All that could be provided was a framework of government to assist the survivors. The RSGs would effectively become the government for the region guided, if possible, once the chaos had started to clear by the CGWHQ. The CGWHQ would be there to show the survivors that there was still a central organisation with a civil government at the helm, to organise inter-regional assistance and to provide food, etc at a strategic level.

From about 1960 sites began to be found for an RSG in every region in England and Wales and for the Scottish and Northern Ireland Central Controls which were effectively RSGs. The initial idea was for purpose built surface block-houses built around a very heavily central redoubt but there was never any money for these and instead a series of ad hoc buildings were adopted and adapted. The sites and origins of the RSGs were –

Region	**RSG location**	**origin**
Northern	Catterick	Army barracks
North East	York Castle/Shipton	Castle/ROTOR site
North Midland	Nottingham	Extended Regional War Room
East	Cambridge	Extended Regional War Room
Southern	Warren Row/Reading	WW2 underground factory/ Regional War Room
South West	Bolt Head near Kingsbridge	ROTOR site
Wales	Brecon	Army barracks
Midland	Drakelow	WW2 underground factory
North West	Preston	Army barracks
South East	Dover Castle/Tunbridge Wells	Old tunnels/Regional War Room
Northern Ireland	Armagh	Army barracks
Scotland	Kirknewton	Extended Regional War Room

RSG 4 at Cambridge. Photo Nick Catford

Compared to the money and effort given to the CGWHQ the RSGs were poorly served. The sites took many years to become operational and were often barely adequate for the role. Many were too small to take the nominal 450 staff, some were on split sites, the barracks would all take many days and thousands of sand-bags to improve their protection and Warren Row was actually considered to be unsafe.

At various times the Regional Commissioner and the RSG was supported by sub-regional level controls to form a regional government. The basic role of regional

government changed little during the Cold War and in 1985 it was given as -

a. determining priorities between local authority controllers and other authorities,

b. control of broadcasting,

c. maintaining public order and the administration of justice,

d. allocation of assistance from the armed forces,

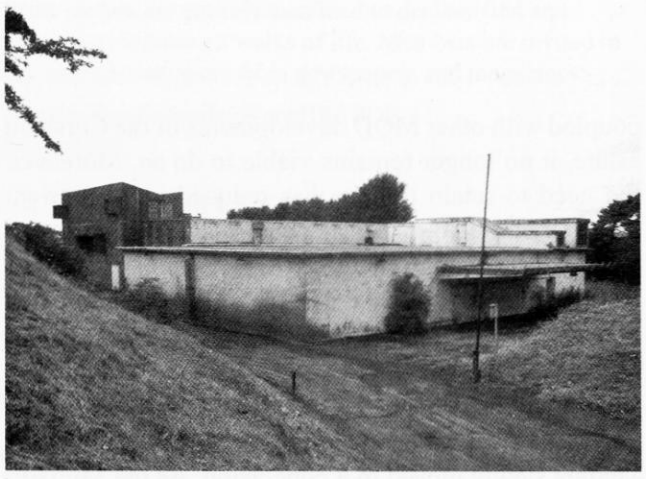
f. provisional fixing of any new agricultural and industrial priorities,

g. the subsequent co-ordination of the survival and recovery of the nation under central government control.

Organisationally, the RSGs were miniature versions of the CGWHQ. The Regional Commissioner would act as the Prime Minister for the region and would have virtually unlimited powers under the emergency legislation which would have been rushed through Parliament to legitimise what, at both central and regional level, would be a dictatorial system of government. The Regional Commissioner would be supported by a team of civil servants and members of the armed forces together with a large communications team and soldiers to run the domestic side. Like the CGWHQ the RSGs would be self-sufficient for at least a month although unlike the CGWHQ they did not have food and other supplies pre-stocked. The RSGs would be in contact with the CGWHQ by land-line and would send regular situation reports to inform the CGWHQ of the effects of the attack and the developing situation afterwards. The Regional Commissioner would in turn receive strategic level instructions from the CGWHQ.

As with the CGWHQ Government departments and other bodies maintained lists of staff designated for roles in the RSGs who were never told of their potential war time roles. Unlike, the CGWHQ the RSG teams received a little training and the RSGs were occasionally exercised although this would have been totally inadequate to prepare the staff for their role. The roles of the RSGs and the CGWHQ although considered in very broad terms were never spelled out in any detail and all concerned would have been in the unenviable position of having to work out what they were supposed to do and how they should do it on the day.

The RSGs as fixed sites were abandoned in 1965 and for the next 15 years the Regional Commissioner and his immediate team would be dispersed around the regional in a similar way to the PYTHON teams for central government. At a suitable time post-strike they would link up with the teams in the lower level controls to form the government for the region.



Kirknewton RSG. Photo Nick Catford

The end

The Corsham site continued to be maintained throughout the 1980s. But with the end of the Cold War it was little more than a white elephant. In 1991 the Official Committee on the Machinery of Government in War decided to put all PERIPHERAL arrangements onto a longer-warning basis and a start was made on emptying various tanks and running down stocks, although many things including the huge stock of stationery were simply left where they were. Perhaps as a sign of the changing times a study made in 1990 looked for and found that there was some blue asbestos and radon gas which, given the poor ventilation, was at unacceptably high levels.

In 1991 the BBC still had a broadcasting studio and a monitoring studio at the site. There were two circuits from Caversham to Wood Norton (a telephone circuit and a 4-wire music-quality broadcasting circuit) which were routed through PERIPHERAL and which could be broken and taken for PERIPHERAL use if required. The telephone exchange was however closed.

In the 1990s the site was costing some £500,000 a year to maintain and four people spent approximately half of their working time there. Despite this, the site was allowed to deteriorate and by the end of the decade was considered uninhabitable.

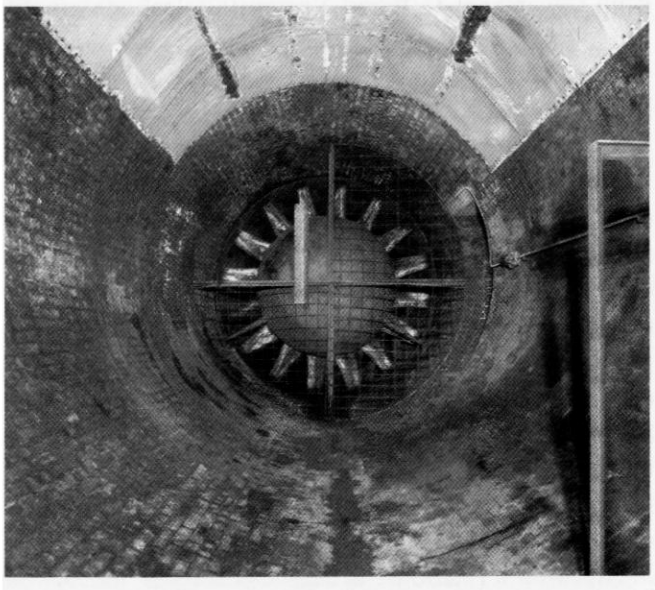
In 1999 the Cabinet Office again contemplated the future of the Corsham site, by now known under yet another name: EYEGLASS. Ownership of the site had been transferred from the Property Services Agency to the Ministry of Defence in March 1991 for administrative convenience but the Cabinet Office retained its interest in Areas 12 – 16 and 21 & 22.

A letter to the Ministry of Defence in June 1999 said: "...what the (draft) paper concludes is that the site has subsequently (since 1991) deteriorated to such an extent that it would be very costly to keep it open and that,

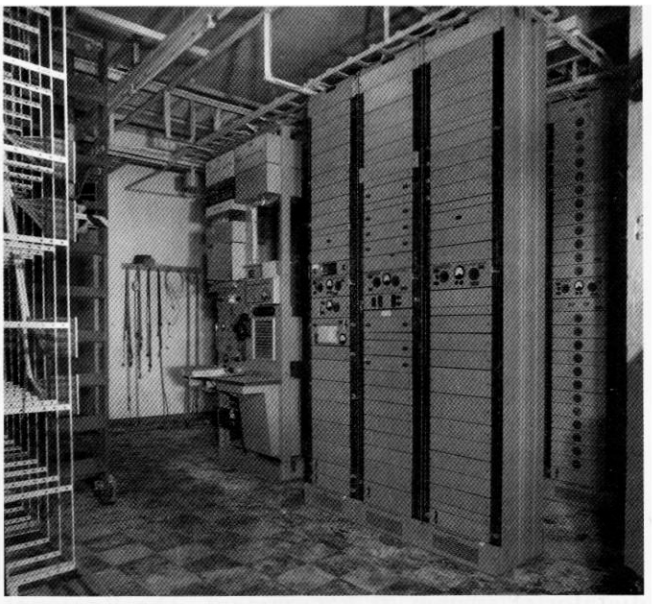
coupled with other MOD developments of the Corsham estate, it no longer remains viable to do so. Moreover, the need to retain the site has reduced in the current changed strategic circumstances. The only pragmatic way forward would, therefore, appear to be to include the site closure costs in with those of the other two underground sites that are also owned by MOD as part of the overall estate development plans". The other two sites mentioned formed RAF Rudloe Manor and the former CGWHQ became known as Site 3.

Matters slowly moved to a conclusion. As the Ministry of Defence website said, when announcing the declassification of Site 3: "In recent years contingency plans have been developed that have greater relevance to the strategic threat faced by the UK. There is therefore no longer any requirement to maintain this facility even at minimal standards of upkeep. Also the whole of the site will be developed within the Corsham Development plan, a PFI initiative..."

The Development Plan covered all the sites in the Corsham area and was intended to create a "communications centre of excellence". So what was once the most secret place in Britain became public knowledge as a result of simple economics.



One of the fans for the air supply system. Photo Nick Catford



Modern Frames in Area 8. Photo Nick Catford

Acknowledgements

Virtually all of the information in this article comes from documents available at the National Archives or released under the Freedom of Information Act by the Cabinet Office and the Home Office. Far too many documents have been seen to list here but anyone wishing to look at the original documents at the National Archives should start with the CAB21 and CAB134 series. The author would also like to thank the following for their generous help: Mark Bennett, Nick Catford, Robin Cherry, English Heritage, Dom Jackson, Bob Jenner, Mike Kenner, Ministry of Defence, Oxford Archaeology, Andy Quinn, Tim Robinson and James Waller. The author has also drawn on the following two papers - "Bennett, M.A (2008a) 'Joint Support Unit, Corsham, Wiltshire. Study of the telecommunications equipment, other artefacts and fixtures in the tunnels. The Report". (Internal report for MOD/EH) and "Bennett, M (2008b) 'Joint Support Unit, Corsham, Wiltshire. Study of the telecommunications equipment, other artefacts and fixtures in the tunnels. The Catalogue" (Internal report for MOD/EH). For a history of the site from the earliest days read "Joint Support Unit (JSU), Corsham; A Characterisation Study of the Quarries, Their 20th-Century Defence Uses And Related Above-Ground Infrastructure" by Jane Phimester of Oxford Archaeology, UK available on-line at http://corsham.thehumanjourney.net/

If you have any comments or information please contact the author at CGWHQ@hotmail.co.uk

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Front cover photo: Canteen servery in Area 12. Photo Nick Catford.
Back Upper: 2 of the Mirrlees generators
Back Lower: East Main Road at Area 9. Photo by Nick Catford

Sub Brit UK Visits Weekend 2010 : Cornwall

Friday 3rd – Sunday 5th September

This year we are off to Cornwall, where there is a wealth of sites to attract our attention. This is also a part of the UK that Sub Brit hasn't visited before as part of one of our organised weekends. A major focus will be some of the numerous sites that make up the World Heritage Mining Landscape. The tin mined here, along with the copper from the Great Orme (Anglesey), were the major constituents which kicked off the Bronze Age in Britain.

Sites we plan to visit include:-

* Rosevale Zennor Tin Mine;
* Pool and/or Levant Engines & Engine Houses;
* Porthcurno Telegraph Station;
* King Edward Mine and former Camborne School of Mines Training Mine;
* WWII Radar site(s).

We are still working on the final list of sites to include, and all those above are subject to confirmation and change.

We will be based near Falmouth and the cost is expected to be about £145 per person. This includes bed and breakfast accommodation for 2 nights, packed lunches on Saturday and Sunday, transport, entrance fees and guides, Sub Brit Dinner on Saturday evening, and a pack of site notes.

If you are interested in joining us then please complete the Booking Form enclosed with this issue of *Subterranea*.

If you have any queries please email info@subbrit.co.uk

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